1896

[From the 50th Report of the New York State Museum.]

ANNUAL REPORT

REMOTE STORAGE

OF THE

STATE BOTANIST

OF THE

STATE OF NEW YORK.

Made to the Regents of the University, Pursuant to Chapter 355 of the Laws of 1883.

By CHARLES H. PECK.

WYNKOOP HALLENBECK CRAWFORD CO.,
STATE PRINTERS,
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No. 49.

IN SENATE,

JANUARY, 1897.

ANNUAL REPORT

OF THE

STATE BOTANIST.

OFFICE OF THE STATE BOTANIST,
ALBANY, *January*, 1897.

To the Honorable the Regents of the University of the State of New York:

I have the honor to present to you my annual report for the year 1896.

Very respectfully.

CHARLES H. PECK.

P. 787.

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N48
1896

REMOTE STORAGE

REPORT.

To the Honorable the Regents of the University of the State of New York:

GENTLEMEN.—I have the honor of submitting to you the following report:

Since the date of my last report, specimens of plants of the State have been collected by the Botanist in the counties of Albany, Essex, Franklin, Greene, Hamilton, Herkimer, Livingston, Onondaga, Rensselaer, Saratoga, Suffolk, Ulster and Wyoming.

Specimens have been contributed that were collected in the counties of Albany, Delaware, Dutchess, Essex, Madison, Monroe, Onondaga, Queens, Rensselaer, Saratoga, St. Lawrence, Warren, Washington and Westchester.

The whole number of species represented by specimens added to the Herbarium is 402, of which the collections of the Botanist represent 367, the contributed specimens 35.

The number of species not before represented in the Herbarium, of which specimens have been added, is 99. Of these, 81 belong to the collections of the Botanist and 18 are represented by the contributed specimens.

Of the species new to the Herbarium, 33 are considered new to science and are described in this report for the first time. Specimens of 27 of these are among the collections of the Botanist, the remaining 6 are represented by contributed specimens.

A list of the names of the species of which specimens have been added to the Herbarium is marked A.

Specimens of plants have been contributed by 43 contributors. Many of their contributions represent species not yet found within the limits of our State. Some of these, though sent for identification merely, have been found to be new or undescribed species and will be carefully preserved as the types of the species represented by them.

A list of the contributors and of their respective contributions is marked B.

A record of species new to our flora, giving locality, time of collecting and other matters of interest concerning them; also in case of new species giving descriptions of them, has been made. A few plants previously reported and regarded as mere varieties of other reported species have now been either raised or restored to the rank of distinct species and included in this record. It is marked C.

According to previous custom, a record of observations upon certain species already reported has been made. This will be found to contain various matters of interest concerning those plants, such as new stations for rare species, an extension of previously known geographical range, unusual habitats, noticeable variations and descriptions of new varieties. It is marked D.

In some of the preceding reports a collation in systematic order has been made of all the known New York species belonging to some particular genus, and full descriptions of the species, generally supplemented by additional remarks on their peculiarities, relations and distinctive features, have been given. This work was begun with the purpose of gradually bringing together material for a descriptive manual of all our agarics. These little monographs have been well received and have been a source of much aid to students of our American mycology. They have been so highly appreciated in some instances that special requests have been received for the reports con-

taining them. Another step has therefore been taken in the present report in pursuance of this plan by the collation of the descriptions of our species of the genus Flammula. This part of the report is marked E.

There is a constantly and rapidly increasing demand for such a descriptive manual as these and the remaining contemplated generic monographs would make if brought together in one volume. Such a volume, especially if each genus could be illustrated by a colored figure of some prominent or type species, would add greatly to the general interest in this branch of mycology and would give to its study a strong forward impulse. The demand for this kind of literature seems to increase more rapidly than its supply. Earnest wishes that such a work might soon be available have repeatedly been made known to me, and I have sometimes been surprised at the indications of a great and widespread interest in this lowly and apparently unattractive class of plants. The fact that these plants exhibit an intelligent design in their structure and are just as capable of systematic arrangement and classification as the higher orders of plants doubtless has much to do in arousing an interest in them, but probably the great promise they give of affording a useful reward for their study in the form of a desirable article of food has also something to do with it. The numerous and earnest applications in advance of its publication for copies of the forthcoming Forty-eighth Report, which contains an illustrated and descriptive account of our edible and poisonous fungi, are indications of this.

The past season has been unusually productive of certain crops. Wild plants have in some instances vied with cultivated ones in showing what large crops of fruit they could produce. The choke cherry shrubs of the Adirondack region have been as heavily loaded in proportion to their size as the apple trees of our orchards. Their

branches have been weighed down by their loads of fruit. And this great and unusual productiveness has been seen in some of our agarics. The common mushroom, *Agaricus campester*, was never before known by me to be more plentiful in our State. It began to make its appearance earlier than usual, generous crops being found early in August, and it continued to appear in great abundance until cold weather stopped its growth. Even moderate frost does not stop its development, for sometimes, as during the autumn of 1895, and also of 1896, plentiful gatherings of it were made after the ground had been white with frost. The markets of Albany have recently been supplied with an unusual abundance of them. They have been exposed for sale by dealers on whose stands they have rarely if ever before been seen. They have been peddled about the streets and offered for sale at the low price of fifteen cents a quart. Farmers in the vicinity of our large cities have found in them a volunteer crop of their pastures that has added no insignificant amount to their incomes. A correspondent writing from Utica says that the crop of the common mushroom in Oneida county was of extraordinary abundance and that the mushrooms were sold in Utica by farmers and peddlers at twenty cents a quart and that he never before knew them to be plentiful enough to be sold at retail in this way.

Another correspondent, who resides in an adjoining State, and who is an enthusiastic mycophagist, writes that he has at last had a sufficiency of mushrooms, and that they have been offered for sale at his door in such quantity that he has been obliged to decline to purchase them even at the extremely low price of five cents a quart. A newspaper report affirms that in a village in the western part of the State mushrooms were sold in lots of ten quarts for twenty-five cents, a rate of two and a half cents a quart. This is a good illustration of the effect of a bountiful supply upon the price of an article.

In many places the smooth mushroom, *Lepiota naucinoides,* has been quite as plentiful as the common mushroom. In some respects this is superior to the common mushroom. It is less liable to the attack of insects, it will keep longer in good condition and it presents a more attractive appearance when cooked, as its gills do not turn black with age or under the influence of heat. Its flavor is thought by some to be inferior to that of the common mushroom, but others affirm that even in this respect it is more delicate and desirable. It has a wider range of habitat, growing in lawns, pastures, grassy places by roadsides, in the plowed land of potato and corn fields and even in thin woods. From its clean white color, the people of some localities have given it the local name of " white mushroom." It has sometimes been mistaken for the chalky mushroom, *Agaricus cretaceus.* But if we may trust the writings of the best European authors in this matter, the chalky mushroom has brown spores, but the smooth mushroom has white spores, although agreeing closely with the chalky mushroom in many of its characters. This fungus was so abundant about Albany that one lover of mushrooms brought in about a peck of them one day, and affirmed that where he picked them he could easily have filled a barrel with those left behind. I have recently received more letters of inquiry concerning the name, character and edibility of this mushroom than of any other. Its neat appearance and great abundance have attracted attention and suggested the possibility of its edibility and awakened in its observers a desire for information concerning it. It therefore seems proper to attribute some of the present interest in the subject of mushrooms to the abundant crop of certain species that the favorable conditions of the season have produced.

In the Forty-first Report an index of the genera and species mentioned in reports twenty-two to thirty-eight inclusive, was published. A similar index has been prepared for the ten succeeding reports, thirty-nine to forty-eight, and is herein included. It is marked F.

In the prosecution of my investigations of the edible qualities of our more promising species of mushrooms, a considerable number have been tried and of these, eight species additional to those already reported seem to me worthy of being placed in the list of edible ones. But the room now occupied in part by me is poorly lighted and not a very suitable place in which to do work requiring a good light. It has, therefore, seemed to me best to omit for the present the attempt to make proper illustrations of these and to report on them, hoping that soon better facilities for such work will be available.

By reason of the requirements of the State Engineer, the room previously occupied in the State Hall as an office for the Botanist and a place for the State Herbarium was vacated in January and the Herbarium cases, containing the mounted specimens and a part of the duplicates, were transferred to the fourth floor of the Capitol and placed in one of the corridors near the office of the State Entomologist.

The remaining duplicates, the specimens unsuitable for mounting, that had been arranged in trays and kept in table cases, the greater part of the specimens of fungi belonging to the exhibit of our State at the World's Columbian Exposition and the models of fungi donated to the State Herbarium by the Agricultural Department at Washington, were packed in boxes and are now in storage on the fifth floor of the Capitol.

Desk room and space for a table was given me for temporary occupancy in one of the rooms of the State Entomologist. By this arrangement my work is necessarily hindered and the proper care of

the stored specimens is practically placed beyond my control. They are not accessible for inspection, reference, study or comparison, and if kept long in that condition they are liable to suffer injury and possibly irreparable loss.

The specimens in the Herbarium cases are kept under lock and key, but the light glass-paneled doors of the cases do not furnish all the safeguard to the contents that is desirable. It is, therefore, greatly to be hoped that this state of things will not continue longer than is absolutely necessary, and that soon suitable safe and adequate accommodations will be assigned to the Herbarium and the necessary office and working room to the Botanist.

Respectfully submitted,

CHAS. H. PECK.

ALBANY, *November* 30, 1896.

(A.)

PLANTS ADDED TO THE HERBARIUM.

New to the Herbarium.

Geranium molle *L.*
G. dissectum *L.*
Prunus Mahaleb *L.*
P. nigra *Ait.*
Amelanchier spicata *DC.*
A. oligocarpa *Rœm.*
Pimpinella Saxifraga *L.*
Sanicula gregaria *Bick.*
Coreopsis tinctoria *Nutt.*
Senecio obovatus *Muhl.*
S. Balsamitæ *Muhl.*
Azalea lutea *L.*
Lysimachia vulgaris *L.*
Symphytum asperrimum *Sims.*
Monarda punctata *L.*
Fissidens incurvus *Schwægr.*
Diplophyllum taxifolium *Dum.*
Jungermannia autumnalis *DC.*
Amanita magnivelaris *Pk.*
Amanitopsis pusilla *Pk.*
Lepiota subprocera *Saut.*
L. Miamensis *Morg.*
L. rugoso-reticulata *Lorin.*
Tricholoma ionides *Bull.*
Clitocybe virens *Scop.*
Collybia nigrodisca *Pk.*
C. uniformis *Pk.*
Pleurotus mastrucatus *Fr.*
Lactarius serifluus *Fr.*
Russula anomala *Pk.*
R. albella *Pk.*
R. cyanoxantha *Fr.*
R. ochrophylla *Pk.*
R. pusilla *Pk.*
Marasmius impudicus *Fr.*
Entoloma grande *Pk.*
Nolanea picea *Kalchb.*
Pholiota rugosa *Pk.*
P. confragosa *Fr.*
Flammula magna *Pk.*
F. rigida *Pk.*
Inocybe unicolor *Pk.*
Cortinarius nitidus *Fr.*
Paxillus Curtisii *Berk.*
Stropharia siccipes *Karst.*
Hypholoma capnoides *Fr.*
Psathyra umbonata *Pk.*
Psathyrella hirta *Pk.*
Coprinus quadrifidus *Pk.*
Boletus auripes *Pk.*
B. firmus *Frost.*
B. fumosipes *Pk.*
B. illudens *Pk.*
B. rubropunctus *Pk.*
Polyporus umbellatus *Fr.*
Hydnum fennicum *Karst.*
H. spongiosipes *Pk.*
H. vellereum *Pk.*
H. albonigrum *Pk.*
H. mirabile *Fr.*
H. separans *Pk.*
H. serratum *Pk.*
Hydnochæte setigera *Pk.*
Radulum Pini-Canadense *Schw.*
Odontia ramosissima *Pk.*
Coniophora subochracea *Pk.*
Exobasidium Peckii *Halst.*
Phyllosticta Apocyni *Trel.*
P. limitata *Pk.*
Dendrophoma crassicollis *S. & S.*
Diplodina quercina *Pk.*
Pestalozzia breviseta *Sacc.*
Puccinia Prenanthis *Fckl.*
Æcidium Rhamni *Pers.*
Æ. Senecionis *Desm.*
Coleosporium Campanulæ *Wint.*
Septoria Lobeliæ-syphiliticæ *Henn.*
Clavaria platyclada *Pk.*
Oidium erysiphoides *Fr.*
Œdocephalum intermixtum *Pk.*
Sporotrichum entomophilum *Pk.*
Ramularia occidentalis *E. & K.*

Ramularia cylindriopsis *Pk.*
Verticillium enecans *Speg.*
Cladosporium caricicolum *Cd.*
Heterosporium gracile *Sacc.*
Phragmotrichum Chailletii *Kze.*
Macrosporium Iridis *C. & E.*
M. Amaranthi *Pk.*
Septonema toruloideum *C. & E.*
Entyloma Veronicæ *Lager.*
Peronospora calotheca *DeBy.*
Exoascus Cerasi *Sadeb.*
Peziza subumbrina *Boud.*
Spathularia rugosa *Pk.*
Cenangium Abietis *Rehm.*
Xylaria castorea *Berk.*
Diaporthe decipiens *Sacc.*
Phyllachora Junci *Fckl.*

Not New to the Herbarium.

Hepatica triloba *Chaix.*
Aquilegia vulgaris *L.*
Nymphæa reniformis *DC.*
N. odorata *Ait.*
Corydalis glauca *Pursh,*
Cardamine hirsuta *L.*
C. pratensis *L.*
Nasturtium sylvestre *R. Br.*
Alliaria Alliaria *Britton.*
Lepidium campestre *Br.*
Barbarea vulgaris *R. Br.*
Helianthemum Canadense *Mx.*
Lechea minor *L.*
Arenaria Grœnlandica *Spreng.*
Silene antirrhina *L.*
Anychia dichotoma *Mx.*
Claytonia Virginica *L.*
C. Caroliniana *Mx.*
Tilia pubescens *Ait.*
T. heterophylla *Vent.*
Flœrkea proserpinacoides *Willd.*
Xanthoxylum Americanum *Mill.*
Rhamnus alnifolia *L'Her.*
Euonymus atropurpureus *Jacq.*
Rhus copallina *L.*
Polygala verticillata *L.*
Melilotus officinalis *L.*
Robinia viscosa *Vent.*
Desmodium nudiflorum *DC.*
D. Dillenii *Darl.*
Gymnocladus Canadensis *Lam.*
Prunus Americana *Marsh.*
P. serotina *Ehrh.*
Pyrus coronaria *L.*
Rubus triflorus *Rich.*
Fragaria Virginiana *Mill.*
Cratægus coccinea *L.*
C. punctata *Jacq.*
C. Oxyacantha *L.*
Ribes rubrum *L.*
Cicuta bulbifera *L.*
Zizia cordata *DC.*
Sanicula Canadensis *L.*
S. Marylandica *L.*
Cornus paniculata *L'Her.*
Viburnum Opulus *L.*
Symphoricarpos vulgaris *Mx.*
Galium verum *L.*
G. Mollugo *L.*
G. pilosum *Ait.*
G. trifidum *L.*
Valeriana sylvatica *Banks.*
Erigeron Philadelphicus *L.*
Solidago puberula *Nutt.*
Aster sagittifolius *Willd.*
A. corymbosus *Ait.*
A. puniceus *L.*
A. undulatus *L.*
A. lævis *L.*
A. diffusus *Ait.*
Cichorium Intybus *L.*
Rudbeckia hirta *L.*
Artemisia caudata *Mx.*
Tragopogon porrifolius *L.*
Hieracium scabrum *Mx.*
H. aurantiacum *L.*
Lactuca sativa *L.*
Vaccinium vacillans *Soland.*
Pyrola rotundifolia *L.*
P. chlorantha *Sw.*
P. elliptica *Nutt.*
P. uliginosa *T. & G.*

Pyrola secunda *L.*
Chimaphila maculata *Pursh.*
Monotropa Hypopitys *L.*
Ilex monticola *Gr.*
Lysimachia thyrsiflora *L.*
Symphytum officinale *L.*
Fraxinus viridis *Mx.*
F. Americana *L.*
Asclepias tuberosa *L.*
A. incarnata *L.*
A. quadrifolia *L.*
Phlox subulata *L.*
Gentiana Andrewsii *Griseb.*
Solanum Dulcamara *L.*
Linaria vulgaris *Mill.*
Veronica Americana *Schw.*
Gerardia flava *L.*
Plantago major *L.*
Amaranthus hypochondriacus *L.*
Atriplex patulum *L.*
Phytolacca decandra *L.*
Rumex crispus *L.*
R. Britannica] *L.*
Fagopyrum esculentum *Mœnch.*
Polygonum incarnatum *Ell.*
P. Pennsylvanicum *L.*
P. Hydropiper *L.*
P. acre *H. B. K.*
Sassafras officinalis *Nees.*
Arceuthobium pusillum *Pk.*
Ulmus fulva *Mx.*
Morus rubra *L.*
Carya tomentosa *Nutt.*
C. porcina *Nutt.*
C. amara *Nutt.*
Betula populifolia *Ait.*
Quercus alba *L.*
Q. macrocarpa *Mx.*
Q. bicolor *Willd.*
Q. tinctoria *Bartr.*
Salix candida *Willd.*
Thuja occidentalis *L.*
Corallorhiza innata *R. Br.*
C. multiflora *Nutt.*
Epipactis Helleborine *Crantz.*
Spiranthes latifolia *Torr.*
Habenaria hyperborea *R. Br.*
Habenaria psycodes *Gr.*
Cypripedium arietinum *R. Br.*
C. spectabile *Sw.*
Smilacina trifolia *Desf.*
Trillium erectum *L.*
Calla palustris *L.*
Lemna trisulca *L.*
Triglochin maritima *L.*
Cyperus esculentus *L.*
Eriophorum lineatum *B. & H.*
E. alpinum *L.*
Carex lupulina *Muhl.*
C. livida *Willd.*
C. lurida *Wahl.*
C. Schweinitzii *Dew.*
C. comosa *Boott.*
C. filiformis *L.*
C. stricta *Lam.*
C. xanthosperma *Wright.*
C. Magellanica *Lam.*
C. limosa *L.*
C. virescens *Muhl.*
C. castanea *Wahl.*
C. laxiflora *Lam.*
C. Albursina *Sheld.*
C. styloflexa *Buckley.*
C. aurea *Nutt.*
C. varia *Muhl.*
C. chordorhiza *Ehrh.*
C. stipata *Muhl.*
C. teretiuscula *Good.*
C. straminea *Willd.*
C. fœnea *Willd.*
C. vulpinoidea *Mx.*
Setaria glauca *Bv.*
S. viridis *Bv.*
Panicum macrocarpon *LeConte.*
Andropogon furcatus *Muhl.*
Glyceria nervata *Trin.*
Agropyron repens *Bv.*
Bromus tectorum *L.*
Festuca duriuscula *L.*
Elymus Virginicus *L.*
E. striatus *Willd.*
Asprella Hystrix *Willd.*
Woodwardia Virginica *Sm.*
Aspidium Boottii *Tuckm.*

Aspidium cristatum *Sw.*
Botrychium ternatum *Sw.*
B. Virginianum *Sw.*
Isoetes echinospora (Durieu).
Amanita cæsarea *Scop.*
A. verna *Bull.*
A. Mappa *Fr.*
A. muscaria *L.*
A. Frostiana *Pk.*
A. rubescens *Fr.*
A. solitaria *Bull.*
Amanitopsis vaginata *Roze.*
A. volvata *Sacc.*
A. farinosa (*Schw.*).
Tricholoma tricolor *Pk.*
T. fumidellum *Pk.*
Clitocybe clavipes *Pers.*
C. illudens *Schw.*
C. truncicola *Pk.*
Omphalia Swartzii *Fr.*
Collybia strictipes *Pk.*
C. conigena *Pers.*
Pleurotus ostreatus *Fr.*
P. lignatilis *Fr.*
Hygrophorus parvulus *Pk.*
H. miniatus *Fr.*
H. virgineus *Fr.*
Lactarius volemus *Fr.*
L. subpurpureus *Pk.*
L. trivialis *Fr.*
L. insulsus *Fr.*
L. subdulcis *Fr.*
L. vellereus *Fr.*
L. deceptivus *Pk.*
Russula nigricans *Fr.*
R. lepida *Fr.*
R. Mariæ *Pk.*
R. virescens *Fr.*
R. flavida *Frost.*
R. variata *Banning.*
R. crustosa *Pk.*
R. decolorans *Fr.*
R. alutacea *Fr.*
Cantharellus cinereus *Fr.*
C. aurantiacus *Fr.*
C. infundibuliformis *Fr.*
Marasmius oreades *Fr.*
Marasmius præacutus *Ellis.*
Lenzites betulina *Fr.*
Pluteus umbrosus *Pers.*
P. longistriatus *Pk.*
Entoloma rhodopolium *Fr.*
Clitopilus Prunulus *Scop.*
Leptonia formosa *Fr.*
Pholiota angustipes *Pk.*
Inocybe infelix *Pk.*
I. rimosa *Bull.*
I. geophylla *Sow.*
Flammula spumosa *Fr.*
F. flavida *Pers.*
Naucoria semiorbicularis *Bull.*
Galera lateritia *Fr.*
Cortinarius collinitus *Fr.*
C. corrugatus *Pk.*
C. violaceus *Fr.*
C. cinnamomeus *Fr.*
C. distans *Pk.*
Paxillus involutus *Batsch.*
P. atrotomentosus *Fr.*
P. panuoides *Fr.*
Agaricus campester *L.*
A. arvensis *Schæff.*
A. silvicola *Vitt.*
Hypholoma fasciculare *Huds.*
Psathyrella disseminata *Pers.*
Poria floccosa *Fr.*
Strobilomyces strobilaceus *Berk.*
Boletus bicolor *Pk.*
B. pallidus *Frost.*
B. subtomentosus *L.*
B. griseus *Frost.*
B. variipes *Pk.*
B. eximius *Pk.*
B. affinis *Pk.*
B. vermiculosus *Pk.*
B. Frostii *Russell.*
B. scaber *Fr.*
B. gracilis *Pk.*
B. indecisus *Pk.*
B. felleus *Bull.*
B. castaneus *Bull.*
B. cyanescens *Bull.*
Hydnum imbricatum *L.*
H. repandum *L.*

Hydnum fruscens *Pers.*
H. albidum *Pk.*
H. aurantiacum *A. & S.*
H. scrobiculatum *Fr.*
H. zonatum *Batsch.*
H. Caput-ursi *Fr.*
H. strigosum *Sw.*
H. ochraceum *Pers.*
H. subfuscum *Pk.*
H. rimulosum *Pk.*
Craterellus Cantharellus *Schw.*
C. cornucopioides *Pers.*
Thelephora laciniata *Pers.*
Stereum spadiceum *Fr.*
S. sericeum *Schw.*
S. versiforme *B. & C.*
S. albobadium *Schw.*
Anthurus borealis *Burt.*
Fuligo varians *Rost.*
Amaurochæte atra (*A. & S.*)
Hemiarcyria rubiformis *R.*
Sphærobolus stellatus *Tode.*
Phyllosticta Podophylli *Wint.*
Glœosporium Apocyni *Pk.*
Puccinia Taraxaci *Plow.*
P. Mariæ-Wilsoni *Clint.*
Ustilago Junci *Schw.*
U. Cesatii *Fisch.*
Uredo Agrimoniæ *Schræt.*
Cæoma nitidum *Schw.*
Æcidium Iridis *Ger.*
Oidium destruens *Pk.*
Rhopalomyces Cucurbitarum *B. & C.*
Verticillium Lactarii *Pk.*
Botrytis Streptothrix *Sacc.*
Rhinotrichum ramosissimum *B. & C.*
Zygodesmus pannosus *B. & C.*
Z. olivascens *B. & C.*
Spathularia flavida *Pers.*
Pezicula carpinea *Tul.*
Patellaria fusispora *C. & P.*
Daldinea concentrica *C. & D.*
D. vernicosa *C. & D.*

(B.)

CONTRIBUTORS AND THEIR CONTRIBUTIONS.

Mrs. E. C. Anthony, Gouverneur, N. Y.

Viola cucullata *Ait.*
Aralia nudicaulis *L.*
Solidago puberula *Nutt.*
Lysimachia stricta *Ait.*
Cypripedium acaule *L.*
Spiranthes cernua *L.*
Spiranthes Romanzoffiana *Cham.*
Fissidens incurvus *Schwægr.*
Amanitopsis pusilla *Pk.*
Tricholoma ionides *Bull.*
Polyporus umbellatus *Fr.*

Mrs. L. L. Goodrich, Syracuse, N. Y.

Pyrus coronaria *L.*
Galium verum *L.*
Epipactis Helleborine *Crantz.*

Mrs. E. G. Britton, New York, N. Y.

Frullania Eboracensis *Lehm.*
Lejeunia serpyllifolia *Lib.*
Blepharostoma trichophyllum *Dum.*
Cephalozia bicuspidata *Dum.*
Scapania nemorosa *Dum.*
Diplophyllum taxifolium *Dum.*
Chiloscyphus polyanthos *Cd.*
Myla Taylori *Gray.*
Jungermannia attenuata *Lind.*
J. autumnalis *DC.*
Marsupella emarginata *Dum.*
Plagiochila porelloides *Lind.*
Aneura bifrons *Lind.*
Tetraplodon mnioides *L. f.*

Mrs. E. Watrous, Hague, N. Y.

Liparis Lœselii *Rich.*

Mrs. H. C. Davis, Falmouth, Me.

Clavaria platyclada *Pk.*

Miss M. L. Overacker, Syracuse, N. Y.

Buda marina *Dum.*
Poterium Sanguisorba *L.*

Mrs. J. A. Lintner, Albany, N. Y.

A collection of about 70 species of dried plants.

Mrs. M. Fuller, Washington, D. C.

Armillaria robusta *A. & S.*
Hydnum fuligineo-album *Schm.*

Arthur K. Harrison, Lebanon Springs, N. Y.

Viola rostrata *Pursh.*
Hypericum nudicaule *Walt.*
Arenaria serpyllifolia *L.*
Vicia Cracca *L.*
Cratægus coccinea *L.*
Cornus paniculata *L'Her.*
Houstonia purpurea *L.*
Ambrosia artemisiæfolia *L.*
Antennaria plantaginifolia *Hook.*
Epigæa repens *L.*
Cuscuta Gronovii *Willd.*
Utricularia cornuta *Mx.*
Rumex Acetosella *L.*
Juncus articulatus *L.*
Cyperus diandrus *Torr.*
C. filiculmis *Vahl.*
Eleocharis acicularis *R. Br.*
Bromus tectorum *L.*
Onoclea sensibilis *L.*
Botrychium Virginianum *Sw.*
Lycopodium clavatum *L.*

Geo. R. Howell, Albany, N. Y.

Artemisia caudata *Mx.*

Augustus Lathrop, Menands, N. Y.

Rudbeckia hirta *L.*

F. C. Stewart, Jamaica, N. Y.

Exobasidium Peckii *Halst.*
Ramularia cylindriopsis *Pk.*
Phyllosticta limitata *Pk.*
Amaurochæte atra (*A. & S.*).
Oidium destruens *Pk.*
Diplodina quercina *Pk.*
Exoascus Cerasi *Fckl.*

M. S. Baxter, Rochester, N. Y.

Aspidium Boottii *Tuckm.*

J. H. Barnhart, Tarrytown, N. Y.

Alliaria Alliaria *Britt.*
Kneiffia fruticosa (*L.*).
Azalea lutea *L.*

L. M. Underwood, New York, N. Y.

Anthoceros lævis *L.*
A. Hallii *Aust.*
A. fusiformis *Aust.*
A. Carolinianus *Mx.*
Riccia nigrella *DC.*
Aytonia erythrosperma *Und.*
Cyathophora quadrata *Trev.*
Lepidozia sphagnicola *Evans.*
Nardia Macounii *Und.*
Chiloscyphus polyanthos *Cd.*
Plagiochila Virginica *Evans.*
Jungermannia Novæ-Cæsareæ *Evans.*
Cephalozia fluitans *Spruce.*
C. Turneri *Lindb.*
Porella pinnata *L.*
Frullania Selwyniana *Pers.*
Lejeunia Macounii *Spruce*
L. serpyllifolia *Lib.*
Kantia Sprengelii (*Mart.*)
Blepharostoma nematodes (*Aust.*)
Lentinus Underwoodii *Pk.*
L. ventricosus *Pk.*
Pholiota sabulosa *Pk.*
Flammula Underwoodii *Pk.*
Boletus tabacinus *Pk.*
Puccinia argentata *Wint.*
Coleosporium Campanulæ *Wint.*

G. F. Atkinson, Ithaca, N. Y.

Sphagnum teres *Angst.*
S. intermedium *Hoffm.*
S. Girgensohnii *Russ.*
Sphagnum acutifolium *Ehrh.*
S. squarrosum *Pers.*
S. Wulfianum *Girg.*

M. B. Fernald, Cambridge, Mass.

Aster Herveyi *Gr.*

W. D. Jackson, Bridgewater, Mass.

Inocybe radiata *Pk.*

F. B. Southwick, Brooklyn, N. Y.

Anthurus borealis *Burt.*

A. C. Waghorne, Bay of Islands, N'fld.

Amphisphæria inæqualis *E. & E.*
Panus betulinus *Pk.*
Sclerotinia infundibuliformis *Pk.*

J. B. Fuller, Rochester, N. Y.

Lepidium campestre *Br.*
Nasturtium sylvestre *R. Br.*
Geranium molle *L.*
Phlox subulata *L.*
Arceuthobium pusillum *Pk.*
Solanum Dulcamara *L.*
Symphytum asperrimum *Sims.*
Rumex crispus *L.*
Œnothera pumila *L.*
Setaria viridis *Bv.*
Bromus tectorum *L.*

Stewart H. Burnham, Vaughns, N. Y.

Nymphæa reniformis *DC.*
Solidago puberula *Nutt.*
Aster sagittifolius *Willd.*
Pimpinella Saxîfraga *L.*
Aspidium Boottii *Tuckm.*
Botrychium ternatum *Sw.*

F. L. Harvey, Orono, Me.

Poria violacea *Fr.*
Hypomyces violaceus *Tul.*
Peziza odorata *Pk.*
Embolus ochreatus *Sacc.*
Heydenîa fungicola *Pk.*

E. Bartholomew, Rockport, Kan.

Lepiota Morgani *Pk.*
L. mutata *Pk.*
Psathyrella debilis *Pk.*
P. gracillima *Pk.*
Polyporus Bartholomæi *Pk.*
Tylostoma punctatum *Pk.*
T. obesum *C. & E.*
Lycoperdon lilaceum *B. & M.*
Scleroderma Corium *Grav.*
Stereum albobadium *Schw.*
Corticium argentatum *E. & E.*
Pistillaria Bartholomæi *E. & E.*
Hypoxylon Caries (*Schw.*).
Puccinia tecta *E. &. B.*
P. Triodiæ *E. & B.*
P. Kansensis *E. & B.*
P. clavispora *E. & B.*
P. jubata *E. & B.*
P. vexans *Arth.*
P. Bartholomæi *Diet.*
P. Xanthifoliæ *E. & E.*
Cryptophallus albiceps *Pk.*

A. J. McClatchie, Pasadena, Cal.

Lentinus magnus *Pk.*
Tubaria tenuis *Pk.*
Hypholoma atrifolium *Pk.*
Montagnites Candollei *Fr.*

H. W. Barratt, Poughkeepsie, N. Y.

Tricholoma terreum *Schæff.* var. fragrans *Pk.*

E. C. Howe, Troy, N. Y.

Kœleria cristata *Pers.*
Agropyron violaceum *Lange.*
Polyporus conchifer *Schw.*

F. C. Yeomans, Camas, Wash.

Clitocybe subsocialis *Pk.*
Omphalia luteola *Pk.*
Galera semilanceata *Pk.*
Boletinus appendiculatus *Pk.*

C. G. Lloyd, Cincinnati, Ohio.

Dædalea Kansensis *Ellis.*
Marasmius gregarius *Pk.*

H. Webster, East Milton, Mass.

Lactarius luteolus *Pk.*

F. G. Howland, Saratoga Springs, N. Y.

Clitocybe dealbata *Sow.*

J. Dearness, London, Canada.

Melogramma horridum *E. & E.*

J. A. Lintner, Albany, N. Y.

Sporotrichum entomophilum *Pk.*

B. Jones, New York, N. Y.

Flammula magna *Pk.*

W. Herbst, Trexlertown, Penn.

Russula subdepallens *Pk.*

C. McIlvaine, Haddonfield, N. J.

Cortinarius intrusus *Pk.*
Flammula edulis *Pk.*

G. E. Francis, Worcester, Mass.

Tricholoma acre *Pk.*
T. polyphyllum *DC.*
Tricholoma pallidum *Pk.*

R. K. Macadam, Boston, Mass.

Cortinarius intrusus *Pk.*

Calvin Shaffer, Albany, N. Y.

An ear of corn with all its kernels smutted.

R. F. Dearborn, Lynn, Mass.

Lepiota rhacodes *Vitt.*

W. Frothingham, Albany, N. Y.

Agaricus campester *L.*

W. Hailes, Albany, N. Y.

Agaricus campester *L.*
A. Rodmani *Pk.*
Lepiota naucinoides *Pk.*

H. C. Beardslee, Cleveland, Ohio.

Boletus rubropunctus *Pk.*

(C.)

SPECIES OF PLANTS NOT BEFORE REPORTED.

Geranium molle *L.*

Grassy places. Rochester. June. Collected by *Mary E. Macauley;* communicated by *J. B. Fuller.*

This plant has been introduced into this country from Europe and is occasionally spontaneous.

Geranium dissectum *L.*

Waste places. Vaughns, Washington county. June. *S. H. Burnham.* This also is an introduced species which is sometimes spontaneous. It resembles our indigenous Carolina crane's bill, *G. Carolinianum,* from which it may be separated by its shorter, nearly globular, finely-pitted seeds. It is a rare species.

Prunus Mahaleb *L.*

Rocky bank of the Hudson river above Lansingburg, Rensselaer county. May and June.

This small cherry as well as our other introduced and cultivated species is sometimes spontaneous.

Prunus nigra *Ait.*

Meadowdale, Helderberg mountains, and various places in Essex county. May.

This wild plum has commonly been considered a mere form or variety of our common wild red plum, *Prunus Americana.* But it seems to me that greater accuracy will be attained and the purposes of science will be better subserved if it is kept separate. Both species occur in the vicinity of Albany and present noticeable differences. In *P. nigra* the flowers are rather larger and sometimes, at least, if not always, the petals assume a pink or rosy hue with advancing age. The fruit is larger and its stone is larger and more compressed.

Amelanchier oligocarpa *Rœm.*

Adirondack mountains. Why this plant was ever reduced to the rank of a mere variety of *A. Canadensis* is more than I can clearly understand. It differs from that species in its leaves, flowers and fruit, and so far as my observation goes, in the size it attains, and the habitat it manifestly prefers. Its leaves are thinner and smooth even when young, they are pointed at the base, tapering into a petiole but two to three lines long, its flowers are smaller and fewer in a cluster, its fruit is oval rather than globose and the plant appears to delight in the cool shade of mountain forests and in elevated situations. It flowers in June and ripens its fruit in July and August.

Amelanchier spicata *DC.*

Sandy soil. Karner, Albany county. Thin shaly soil covering rocks. Near Lansingburg, Rensselaer county. Flowering in May, in fruit in June and July.

This plant, as it occurs with us, is well marked and quite distinct in the character of its leaves. These are very unlike those of the preceding species in character and texture. They are thick and firm, densely woolly on the lower surface when young, orbicular or oval and very obtuse at both ends. They are more coarsely serrate than in our other species, and the serratures are mostly limited to the upper half of the leaf. The petiole varies in length from three to six lines. The flowers are small and commonly numerous, giving a

spike-like appearance to the racemes. The plants are small, those of the Lansingburg station scarcely exceeding a foot in hight, yet they were found flowering and fruiting.

Pimpinella Saxifraga *L.*

In a meadow near Vaughns. *Burnham.* This is an introduced species rarely found growing spontaneously.

Sanicula gregaria *Bicknell.*

Near Albany. June. This species has recently been separated from *S. Marylandica,* with which it has been confused. The fertile flowers have long styles as in that species, but it is more gregarious in its mode of growth, its petals are yellowish, its stem naked below the branches or at most bearing but one leaf, and its rather numerous radical leaves have only five leaflets each, the basal leaflets not being deeply cleft as in both *S. Marylandica* and *S. Canadensis.*

Coreopsis tinctoria *Nutt.*

In a meadow between Ballston and Round Lake, Saratoga county. August.

This plant is indigenous west of the Mississippi river. It is often cultivated as an ornamental plant and it sometimes escapes from cultivation and becomes sparingly spontaneous.

Azalea lutea *L.*

Tarrytown. May. *J. Hendley Barnhart.* Pennsylvania is given in the Manual as the northern limit of the range of this beautiful flame-colored azalea (*Rhododendron calendulaceum* Torr. in the Manual), but its recent discovery in Westchester county extends this limit northward and adds a pretty flowering shrub to our flora.

Senecio obovatus *Muhl.*

Rather moist soil in thin woods. Southfields, Orange county, and New Baltimore, Greene county. June.

This and the next following species were reported by Dr. Torrey as varieties of *Senecio aureus.* But the present tendency of our leading

botanists is to recognize their specific rank. They are, therefore, now reported as valid species. The radical or basal leaves furnish the most available characters for the separation of the four species formerly lumped together under one name. The distinguishing features may be tabulated as follows:

	Radical leaves cordate.....	S. aureus.
	Radical leaves not cordate.....	1
1	Radical leaves round, obovate or spatulate, tapering below into a somewhat flattened or margined and commonly glabrous petiole.....	S. obovatus.
1	Radical leaves oblong or oblong-lanceolate, crenately toothed, tapering below into a slender more or less hairy or tomentose petiole.....	S. Balsamitæ.
1.	Radical leaves oblong or lanceolate, sharply serrate, almost truncate at the base or abruptly narrowed into the glabrous petiole.....	S. Robbinsii.

Senecio Balsamitæ *Muhl.*

Rocky places or thin soil covering rocks. Brownsville, Jefferson county, and Whitehall, Washington county. June.

In the Forty-seventh Report, page 16, this plant was confused with *S. Robbinsii* and subjoined to it as variety *subtomentosa*. It is clearly distinct.

Lysimachia vulgaris *L.*

The common loosestrife was doubtless introduced into this country as an ornamental garden plant, but it sometimes escapes from cultivation and is found growing freely in waste places and by roadsides. Cedarville, Herkimer county. June.

Symphytum asperrimum *Sims.*

Roadsides. Chili, Monroe county. *Mrs. J. H. McGuire.* Communicated by *J. B. Fuller.*

This has been introduced and cultivated as a fodder plant, but like many others it is disposed to run wild.

Fissidens incurvus *Schwægr.*

Rocks in damp places. Trout lake, St. Lawrence county. October. *Mrs. E. C. Anthony.*

Diplophyllum taxifolium *Dumort.*

Wet cliffs. Avalanche Pass, Essex county. August. *Mrs. E. G. Britton.* In the Manual this plant bears the name *Diplophyllum albicans* var. *taxifolium.*

Jungermannia autumnalis *DC.*

Trail to Rock falls, Adirondack mountains. August. *Mrs. Britton.*

Amanita magnivelaris *n. sp.*

Pileus convex or nearly plane, glabrous, slightly viscid when moist, even on the margin, white or yellowish-white; lamellæ close, free, white; stem long, nearly equal, glabrous, white, furnished with a large membranous white annulus, sheathed at the base by the appressed remains of the membranous volva, the bulbous base tapering downwards and radicating; spores broadly elliptical, .0004 in. long, .00024 to .0003 broad.

Pileus 3 to 5 in. broad; stem 5 to 7 in. long, 4 to 6 lines thick.

Solitary in woods. Port Jefferson, Suffolk county. July.

The species resembles *Amanita verna*, from which it is separated by its large persistent annulus, the elongated downwardly tapering bulb of its stem and especially by its elliptical spores.

Amanitopsis pusilla *n. sp.*

Pileus thin, broadly convex or nearly plane, subglabrous, slightly umbonate, even on the margin, pale brown; lamellæ narrow, thin, close, free, becoming brownish; stem short, hollow, bulbous, the bulb margined by the remains of the membranous volva; spores broadly elliptical, .0002 to .00024 in. long, .00016 broad.

Pileus about 1 in. broad; stem 8 to 12 lines long, 1 to 2 lines thick.

Grassy ground. Gouverneur, St. Lawrence county. September. *Mrs. Anthony.*

Lepiota subprocera *Saut.*

Round Lake, Saratoga county. August. This plant differs but little from *L. procera*, the parasol mushroom. Its smaller size and smooth unspotted stem are the chief marks of distinction. The

author of the species claims that the scales of its pileus are more persistent, but these are commonly persistent in undoubted *L. procera.*

Lepiota Miamensis *Morg.*

Thin woods and heathy places. Fulton Chain, Herkimer county. August.

Our specimens differ slightly from the typical form in being smaller and in having the pileus sometimes umbonate. This is 6 to 12 lines broad and the stem is 12 to 18 lines long in our specimens.

Lepiota rugoso-reticulata *Lorin.*

Open mossy or heathy places. Sand Lake, Rensselaer county, Saranac Lake, Franklin county, and Karner, Albany county.

This species resembles *L. amianthina* in color, but in size and shape and in the attachment of the lamellæ it approaches *L. granulosa.* Its distinguishing characters are its rugose or rugose-reticulated pileus and its strong odor. This is unpleasant and resembles that of vegetable mold or mossy humus. The surface of the pileus is commonly radiately wrinkled and the rugosity is usually more pronounced in the center of the pileus than toward or on the margin. Specimens sometimes occur that have the surface of the pileus even. The flesh is white when dry and the lamellæ are white. The stem is yellowish within but it has a white pith or is hollow. It is pale ochraceous below the slight or evanescent annulus. The pileus also is of this color and both are granulose. The margin of the pileus is often appendiculate with the remains of the veil.

Tricholoma ionides *Bull*

Grassy ground and lawns. Gouverneur. Sept. *Mrs. Anthony.* The specimens are smaller than the typical form, the pileus being one inch or less in diameter.

Clitocybe virens *Scop.*

Thin woods. Selkirk, Albany county. Aug. This species, like *C. odora,* has an agreeable fragrance, but it may be distinguished from that plant by its thin pileus and thin narrow crowded white lamellæ.

Collybia nigrodisca *n. sp.*

Pileus thin, convex, glabrous, whitish or smoky white with a brown or blackish disk, flesh white; lamellæ rather broad, subdistant, rounded behind, adnexed, whitish inclining to creamy yellow; stem equal, hollow, pruinose, even or but slightly striate, whitish; spores subelliptical, .00024 to .0003 in. long, .00016 broad.

Pileus 1 to 1.5 in. broad; stem 1 to 1.5 in. long, about 2 lines thick.

Sandy soil. Wading River, Suffolk county. July.

In size and in the character of the lamellæ this plant bears some resemblance to *Marasmius oreades,* but in other respects it is far different.

Collybia uniformis *n. sp.*

Pileus thin, hemispherical or convex, glabrous, hygrophanous, grayish-brown when moist, paler when dry, the thin margin even, at first involute or strongly incurved; lamellæ narrow, crowded, rounded behind, nearly free, whitish; stem equal, glabrous or slightly pruinose, hollow, grayish-brown, with a slight white mycelioid tomentum at the base; spores minute, subglobose, .00012 to .00016 in. broad.

Plant cæspitose; pileus 3 to 6 lines broad; stem about 1 in. long, 1 line thick.

Among mosses on much decayed wood. Saranac Lake. Sept.

The species belongs to the tribe Confertipedes and is related to *C. acervata, C. Familia,* etc. The plants are quite regular and uniform in size and shape.

Pleurotus mastrucatus *Fr.*

Decaying wood. Bethlehem, Albany county. September. This species is very rare with us, but it is well marked by the gelatinous upper stratum of the pileus.

Lactarius serifluus *Fr.*

Woods. Port Jefferson, Suffolk county. July.

The plants referred to this species in Report 24, p. 74, proved to be distinct and were published in Report 28, p. 50, under the name *Lactarius aquifluus.* The plants now under consideration agree well with the description and figures of *L. serifluus* and are believed to be the true species.

Russula anomala *n. sp.*

Pileus thin, fragile, nearly plane or somewhat centrally depressed, with no viscid or separable pellicle, distinctly striate on the margin, white, flesh white, taste acrid; lamellæ thin, moderately close, adnate, entire or with an occasional short one intervening, white, dusted with the white spores when dry; stem equal, solid or spongy within, white; spores subglobose, .0003 to .00035 in. broad.

Pileus 1 to 1.5 in. broad; stem 1 to 1.5 in. long, 3 to 4 lines thick.

Damp ground under trees. Port Jefferson. July.

This plant has the fragile pileus and striate margin characteristic of the tribe Fragiles, but its pileus is destitute of the viscid separable pellicle which also belongs to species of that tribe. If it had a viscid pileus it would approach *Russula fragilis* so closely that it might be regarded as a white variety of that species. It will probably be better to refer it to the tribe Rigidæ, notwithstanding the fragile character of its pileus and its distinctly striate margin.

Russula pusilla *n. sp.*

Pileus very thin, nearly plane or slightly and umbilicately depressed in the center, glabrous, slightly striate on the margin, red, sometimes a little darker in the center, the thin pellicle separable, flesh white, taste mild; lamellæ broad for the size of the plant, subventricose, subdistant, adnate or slightly rounded behind, white, becoming yellowish-ochraceous in drying; stem short, soft, solid or spongy within, white; spores faintly tinged with yellow, .0003 in. broad.

Pileus scarcely 1 in. broad; stem 6 to 12 lines long, 2 to 3 lines thick.

Bare ground in thin woods. Port Jefferson. July.

The coloring matter of the pileus may be rubbed upon paper and produce on it red stains if the surface is previously moistened with water or dilute alcohol. This is one of the smallest Russulas known to me. The pileus is less than an inch broad and the stem less than an inch long in all the specimens seen by me. The species is closely allied to *R. puellaris*, and especially resembles the variety *intensior* in color. It differs in its smaller size, even or but slightly striate margin,

broad lamellæ and in the stem or flesh not becoming yellowish-spotted where touched.

Russula ochrophylla *n. sp.*

Pileus firm, convex becoming expanded and often somewhat centrally depressed, even or rarely very slightly striate on the margin when old, purple or dark purplish-red, flesh white, purplish under the adnate cuticle, taste mild; lamellæ entire, a few of them forked at the base, subdistant, adnate, at first yellowish, at length bright ochraceous-buff, dusted by the spores when dry, the interspaces somewhat venose; stem equal or nearly so, solid or spongy in the center, reddish or rosy tinted, paler than the pileus; spores bright ochraceous-buff, globose, verruculose, .0004 in. broad.

Pileus 2 to 4 in. broad; stem 1.5 to 2.5 in. long, 6 to 10 lines thick.

Grassy ground under oak trees. Menands. July.

Var. albipes n. var. Pileus deep red; stem white; otherwise like the type.

In the size of the plant and the color of the pileus and stem this is almost exactly like *Russula drimeia,* as shown by Cooke's Illustr. pl. 1023. It also agrees in nearly all points with the description of that species, differing only in the color of the lamellæ and spores and in its mild taste. It is therefore with some hesitation that I have separated it as a distinct species. The flavor has been made a character of such prime importance in distinguishing the species of Russula that in Massee's recent work, British Fungus Flora, all the British species are grouped in two Sections, one of which depends upon its species having a mild taste, the other, an acrid one. It scarcely seems right to disregard a character to which so much importance has been given, and therefore I have recognized it. In the figure of *R. drimeia,* to which I have referred, the lamellæ are of a canary yellow, a color which I have not seen in the lamellæ of our plant. In it they are at first pale yellow, but when mature and in the dried state both they and the spores are almost exactly the color called in Ridgway's Nomenclature of Colors, ochraceous-buff. If there is any departure they are a shade brighter.

The mild taste of our plant led me to try its edible qualities. The flavor was not at all disagreeable, but the firmness of the flesh was

such that it might be called rather tough, and it would probably exclude this species from the first class of edible mushrooms. If stewed in milk or cream the liquid assumes some of the purplish or pinkish-purple hue of the mushroom. This coloration would probably be avoided if the mushrooms were peeled before stewing.

According to Cooke, the flavor of *R. drimeia* is "so intensely peppery that after tasting a small fragment, the tongue tingled for more than half an hour."

Russula cyanoxantha *Fr.*

Grassy ground. Menands. August.

Russula albella *n. sp.*

Pileus thin, fragile, dry, plane or slightly depressed in the center, even or obscurely striate on the margin, commonly white, sometimes tinged with pink or rosy red, especially on the margin, flesh white, taste mild; lamellæ entire, white, becoming dusted by the spores; stem equal, solid or spongy within, white; spores white, globose; .0003 in. broad.

Pileus 2 to 3 in. broad; stem 1 to 2 in. long, 3 to 4 lines thick.

Dry soil of frondose woods. Port Jefferson. July.

Closely allied to *R. lactea*, but differing in its fragile texture, entire lamellæ, more slender stem and in the pileus not cracking into areolæ.

Marasmius impudicus *Fr.*

Under pine trees and sweet fern bushes. Delmar. September.

Entoloma grande *n. sp.*

Pileus fleshy, thin toward the margin, glabrous, nearly plane when mature, commonly broadly umbonate and rugosely wrinkled about the umbo, moist in wet weather, dingy yellowish-white verging to brownish or grayish-brown, flesh white, odor and flavor farinaceous; lamellæ broad, subdistant, slightly adnexed, becoming free or nearly so, often wavy or uneven on the edge, whitish becoming flesh-colored with maturity; stem equal or nearly so, solid, somewhat fibrous externally, mealy at the top, white; spores angular, .0003 to .0004 in. long and broad.

Pileus 4 to 6 in. broad; stem 4 to 6 in. long, 8 to 12 lines thick.

Thin mixed woods. Menands. August.

The flavor of this mushroom is not at first disagreeable, but an unpleasant burning sensation is left in the mouth for a considerable time after tasting. It is therefore to be regarded with suspicion.

Nolanea picea *Kalchb.*

Pileus thin, varying from broadly conical to convex or nearly plane, often irregular from its crowded or cæspitose mode of growth, even, covered with a grayish pruinosity, hygrophanous, blackish when moist, grayish-brown when dry, the thin even margin at first incurved and slightly tinged with red, extending beyond the lamellæ; lamellæ moderately close, rounded behind and slightly adnexed, often becoming ventricose with the expansion of the pileus, more or less serrate on the margin, whitish then flesh-colored; stem equal, often flexuose, stuffed or hollow, reddish-brown or blackish; spores narrowly elliptical, .0003 to .0004 in. long, .0002 broad.

Pileus 8 to 24 lines broad; stem 1 to 1.5 in. long, 1 to 2 lines thick.

Among chips. Adirondack mountains. September.

This fungus has the fishy odor of such species as *Nolanea nigripes* and *N. pisciodora,* to which it is closely related, but from which it differs in its glabrous or merely pruinose pileus and in its coloration. We have referred it to *N. picea,* although it differs in some minor particulars from the description of that species. On this account we have recorded the description of our plant as made at the time of the collection of the specimens. It will be seen that there is no papilla on the pileus in our plant, yet this is given as one of the characters of the European species. Still the figures of it as given by Kalchbrenner himself and also by Gillet show no papilla, and for this reason especially we have the more confidently considered our plant as specifically the same.

Pholiota rugosa *n. sp.*

Pileus thin, broadly conical or campanulate becoming expanded and often umbonate, hygrophanous, yellowish-red or ferruginous and striatulate on the margin when moist, pale yellow or buff and commonly rugose when dry; lamellæ close, adnexed, yellowish-white

or cream-colored becoming ferruginous or brownish-ferruginous with age, white and minutely denticulate on the edge; stem flexuose, equal or slightly thickened toward the base, hollow, fibrillose or sometimes squamulose below the annulus, pruinose or mealy above, pallid, the annulus membranous, white or whitish, radiately striate on the upper surface; spores narrowly elliptical, .0004 to .0005 in. long, .00024 to .00028 broad.

Pileus 6 to 12 lines broad; stem 1 to 2 in. long, 1 to 2 lines thick.

Ground among decaying chips. Adirondack mountains. September.

The fibrils of the lower part of the stem have a tawny hue. The species is closely related to *P. togularis*, from which it is separated because of the hygrophanous pileus and the adnexed lamellæ. From *P. blattaria* the different color adnexed lamellæ and larger spores separate it. The peculiar upper surface of the annulus is similar to that indicated in the figure of *P. togularis* var. *filaris*, as given by Fries.

Pholiota confragosa *Fr.*

Decaying wood in woods. Adirondack mountains. September.

This is apparently a variable species. Our specimens resemble more closely the long-stemmed form figured by Fries, but this form also sometimes has the slight but evanescent hairy flocs or scales when young, although the figures do not show them. European authors do not agree in the characters ascribed to the spores of this species; one describing them as "elliptic-oblong, ferruginous 8x4," another as "subellipsoid or sphaeroid-ellipsoid, yellowish, 5-6x3-5 or 12x5." These can not all be correct, and it is probable that two or three species have been confused. In our plant the spores are really naviculoid or boat shaped. They are about .0003 in. long, and .00016 or .0002 broad, according to the position they are in, being more narrow when viewed edgewise than when viewed flatwise. In color they are pale ferruginous or yellowish-ferruginous. *P. unicolor*, according to the description, has broader lamellæ and longer spores.

Flammula magna *n. sp.*

Pileus fleshy, broadly convex, soft, dry, fibrillose and somewhat virgate, pale yellow or buff, the margin commonly becoming revo-

lute with age, flesh whitish or yellowish; lamellæ close, adnate or slightly decurrent, often crisped or wavy toward the stem, about three lines wide, ochraceous; stem equal or thickened toward the base, fleshy-fibrous, solid, elastic, fibrillose, colored like the pileus, brighter yellow within; spores subelliptical, ochraceous, .0004 in. long, .00024 broad.

Cæspitose; pileus 4 to 6 in. broad; stem 3 to 4 in. long, 8 to 12 lines thick.

About the base of trees. Westchester county. October. *Basset Jones.*

This is a large and showy species. The stems are sometimes united at the base into a solid mass. The young lamellæ are probably yellow, but I have seen only mature specimens.

Flammula rigida *n. sp.*

Pileus thin, rather firm and rigid, convex becoming nearly plane or centrally depressed, sometimes wavy on the margin, glabrous, hygrophanous, rusty-tawny or subferruginous when moist, buff or grayish-buff when dry, flesh concolorous; lamellæ moderately close, adnate, creamy white, becoming rusty tan color or subferruginous; stem equal or nearly so, tough, slightly striate, colored like the pileus, with a compact white tomentum on the lower part or at the base; spores broadly elliptical, .0003 to .00035 in. long, .00016 to .0002 broad.

Pileus 1 to 1.5 in. broad; stem 1 to 2 in. long, 1.5 to 3 lines thick.

Chip dirt about an old lumber camp. Adirondack mountains. September.

The plants are gregarious and by their mycelium they adhere closely to chips and fragments of wood from which they grow and which are usually pulled up with them when they are gathered.

Inocybe unicolor *n. sp.*

Pileus at first conical or very convex, becoming expanded or broadly convex, firm, tomentose-squamulose, pale-ochraceous or grayish-ochraceous, flesh white; lamellæ broad, subdistant, somewhat ventricose, pale-ochraceous when young, tawny-brown when old; stem slender, equal, firm, flexuose, solid, squamulose, colored

like the pileus; spores tawny-brown, elliptical, even, .0004 to .0005 in. long, .0002 to .00025 broad.

Pileus 8 to 12 lines broad; stem 1 to 1.5 in. long, 1 to 2 lines thick.

Clay soil. Menands. July. This plant resembles *Inocybe ochracea*, from which it may be separated by its more highly colored squamulose stem and its larger spores. It belongs to the tribe Squarrosæ.

Cortinarius nitidus *Fr.*

Swampy woods. Gansevoort. August.

Paxillus Curtisii *Berk.*

Decaying pine wood and stumps. Mechanicville and Round Lake. September and October. The description of this species appears to have been omitted from Saccardo's Sylloge Fungorum. It resembles *Paxillus panuoides* in size and general habit, but it differs from that species very decidedly in its orange-colored narrow lamellæ, which are more wavy or crisped and more branched and connected. Sometimes they anastomose throughout their whole length, sometimes they are forked near the margin of the pileus and abundantly crisped and connected toward the base. The spores are minute, .00016 in. long, .00008 broad. The color of the pileus in the typical form is said to be sulphur-yellow and the substance tawny. In our specimens the pileus is commonly tawny and the flesh yellow, just the reverse of the characters ascribed in the type. The pileus is apt to become blackish in drying, either wholly or in part, and the plant emits a peculiar strong odor, which it retains for a long time even in the dried state.

Stropharia siccipes *Karst.*

On dung in pasture. Jordanville, Herkiner county. June.

This dung-inhabiting mushroom is related to *Stropharia stercoraria* and *S. semiglobata*, but it differs from both in its dry flocculose and minutely fibrillose stem. The veil is white and often adheres in fragments to the margin of the pileus, thereby making an approach to the genus Hypholoma. In such cases the annulus is very slight or wholly wanting. The stem is stuffed with a white cottony pith, but it sometimes becomes hollow with age. The pileus is viscid when moist and quite variable in color.

Hypholoma capnoides *Fr.*

On and about spruce stumps and decaying wood of spruce. Adirondack mountains. September.

Psathyra umbonata *n. sp.*

Pileus submembranous, campanulate, umbonate, hygrophanous, purplish-brown and striatulate when moist, grayish-white when dry, even or slightly rugulose, atomate, the umbo commonly paler than the rest; lamellæ rather broad, moderately close, ventricose, subadnate, brownish-red, becoming purplish-brown and finally almost black; stem slender, flexuose, hollow, white, commonly hairy-tomentose at the base and slightly mealy at the top; spores blackish-brown or almost black, .0005 to .0006 in. long, .0003 broad.

Chip dirt. Lake Pleasant. July.

The species is apparently related to *Psathyra corrugis*, but differs in the color of the pileus and of the young lamellæ and in the flexuose stem. The umbo is very prominent and when the pileus begins to lose its moisture the umbo becomes very conspicuous, for it first loses color and becomes much paler than the rest, appearing like a whitish knob in the midst of a dark background. The margin of the young pileus is straight and sometimes shows vestiges of a slight grayish fibrillose veil. In dried specimens the pileus is apt to become sulcate-striate or radiately sulcate.

Coprinus quadrifidus *n. sp.*

Pileus thin, at first oval, then campanulate, finally more or less expanded with the margin revolute, when young adorned with a superficial floccose-tomentose veil, which soon separates into evanescent flakes or scales and reveals the finely striate surface of the pileus, whitish becoming grayish or grayish-brown with age, the margin often wavy or irregular; lamellæ broad, thin, crowded, free, at first whitish, then dark purplish-brown, finally black; stem equal or slightly tapering upward, hollow, floccose-squamulose, white, sometimes with a slight evanescent floccose ring near the base; spores .0003 to .0004 in. long, .00016 to .0002 broad.

Plant gregarious or cæspitose; pileus 2 to 3 in. broad; stem 3 to 4 in. long, 3 to 4 lines thick.

Damp vegetable mold or much decayed wood under basswood trees. Portage. June.

When mature the pileus becomes perforated in the center and soon splits into three to five, commonly four, segments, the divisions extending a short distance down the stem, allowing the parts of the pileus to droop on the recurved upper parts of the stem. This remarkable feature of the species has suggested the specific name. The plant is referable to the tribe Tomentosi, but the pileus soon becomes glabrous. The veil is whitish or slightly yellowish. The spores appear at first to be brownish-black, but they become black after a short exposure.

Psathyrella hirta *n. sp.*

Pileus thin, hemispherical or convex, adorned when young with erect or spreading tufts of white, easily detersible and quickly evanescent hairs, hygrophanous, brown or reddish-brown and slightly striatulate when moist, pale grayish-brown or dingy whitish when dry, flesh subconcolorous; lamellæ broad, moderately close, adnate and often furnished with a decurrent tooth, at first pallid, becoming blackish-brown or black; stem flexuose, squamose, hollow, shining, white; spores elliptical, black, .0005 to .00055 in. long, .00025 to .0003 broad.

Subcæspitose; pileus 4 to 6 lines broad; stem 1 to 2 in. long 1 to 1.5 lines thick.

Dung or dungy ground in shaded places. Adirondack mountains. July.

The species has some points of similarity to *Psathyra gossypina* and *P. pennata,* but its adnate lamellæ and black spores distinguish it from both. The hairs of the pileus are coarse and vanish so easily that they are preserved with difficulty in the dried specimens.

Boletus auripes *n. sp.*

Pileus convex, subglabrous, yellowish-brown, sometimes cracking in areas when old, flesh yellow, fading to whitish with age; tubes nearly plane, their mouths small, subrotund, at first stuffed, yellow; stem nearly equal, solid, even or slightly reticulated at the top, bright yellow, a little paler within; spores ochraceous-brown tinged with green, .0005 in. long, .0002 broad.

Pileus 3 to 6 in. broad; stem 3 to 5 in. long, 8 to 12 lines thick.

Under mountain laurel, *Kalmia latifolia*. Port Jefferson. July.

The whole plant, except the upper surface of the pileus, is of a beautiful yellow color. The stem is sometimes more highly colored than the tubes. The species is referable to the tribe Edules.

Boletus firmus *Frost.*

Thin woods. Ballston lake. August. The spores in our plant are broader than the dimension given in the description. They are .0005 in. long and .00024 broad. In other respects the agreement with the description is very close.

Boletus fumosipes *n. sp.*

Pileus convex or nearly plane, minutely tomentose, sometimes minutely rivulose, dark olive-brown, flesh whitish; tubes at first nearly plane, becoming convex with age, their mouths whitish when young, becoming yellowish-brown, changing to bluish-black where bruised; stem equal, solid, smoky-brown, minutely scurfy under a lens; spores purplish-brown, .0005 to .0006 in. long, .0002 to .00025 broad.

Pileus 1 to 2 in. broad; stem 1 to 2 in. long, 3 to 4 lines thick.

Woods. Port Jefferson. July.

This species resembles small dark colored forms of *B. chrysenteron*, and this resemblance is still more noticeable in those specimens in which the pileus cracks in areas, for in these the chinks become red as in that species. The different color of the stem and tubes will at once separate these species.

Boletus illudens *n. sp.*

Pileus convex, dry, subglabrous, yellowish-brown or grayish-brown, sometimes tinged with red, especially in the center, flesh pallid or yellowish; tubes bright yellow, plane or somewhat convex when old, adnate, their mouths angular or subrotund, often larger near the stem; stem nearly equal, sometimes abruptly pointed at the base, glabrous, pallid or yellowish, coarsely reticulated either wholly or at the top only; spores oblong or subfusiform, yellowish-brown tinged with green, .00045 to .0005 in. long, .00016 to .0002 broad.

Pileus 1.5 to 3 in. broad; stem 1.5 to 2.5 in. long, 3 to 5 lines thick.

Woods and copses. Port Jefferson. July.

This species bears a strong resemblance to *B. subtomentosus*, with which it doubtless has been confused. The strong point of distinction is in the reticulated stem, which should place it among the Calopodes. In large specimens these coarse reticulations extend to the base of the stem, in smaller ones they are often limited to the upper part. The spores when first dropped on white paper are dark green or olive green, but they fade to a yellowish-brown, barely tinted with green.

Boletus rubropunctus *n. sp.*

Pileus convex, glabrous, reddish-brown, flesh yellowish, unchangeable; tubes nearly plane, depressed about the stem, their mouths small, round, bright golden yellow, not changing color where bruised; stem firm, solid, tapering upward, yellow, punctate with reddish dots or squamules; spores olive-green, .0005 in. long, .00016 to .0002 broad.

Pileus 1 to 2 in. broad; stem 1 to 2 in. long, 3 to 6 lines thick.

Woods. Port Jefferson. July. Cold Spring Harbor. *H. C. Beardslee.*

This is a pretty boletus, well marked by the red dots of the stem. It is apparently a very rare species. *B. radicans* is said to have the stem sprinkled with red particles, but that is a larger plant with the margin of the pileus persistently involute or incurved and with a radicating stem, characters which are not shown by our fungus.

Polyporus umbellatus *Fr.*

Gouverneur, St. Lawrence county. *Mrs. E. C. Anthony.*

Hydnum fennicum *Karst.*

Woods, on naked soil or among fallen leaves. Port Jefferson. July.

Our plant differs in some respects from the description of the European species, but its general correspondence is so close that it can scarcely be specifically distinct. The European fungus is said to have an acerb taste, approaching, in this respect, *H. acre.* But this species

is described as having a bitterish peppery taste. In our fungus the taste is bitter, resembling that of *Boletus felleus*. It has a farinaceous odor and a slight farinaceous flavor with the first taste, but this is soon overcome by the very bitter flavor.

Hydnum albonigrum *n. sp.*

Pileus convex or nearly plane, broadly obconical, tough but soft and densely tomentose on the upper surface, buff-brown or smoky brown, often wholly covered with a whitish downy tomentum, sometimes on the margin only, substance within soft tomentose and buff-brown in the upper stratum, the lower half hard and black; aculei short, at first white, then whitish or grayish; stem short, often irregular compressed or confluent, blackish when moist, buff-brown when dry, covered with a thick dense tomentum, which is frequently more abundant toward the base, hard and black within; spores white, globose, .00016 to .0002 in. broad.

Pileus 1 to 3 in. broad, sometimes two or three confluent; stem 1 to 2 in. long.

Ground in mixed woods. Gansevoort. August.

This species is apparently near *H. nigrum*, but it is well marked by the peculiar structure of the pileus which is similar to *H. mirabile* in having the upper half densely tomentose and soft, the lower half hard and black and continuous with the stem. Like that species also the tomentum of the pileus and stem imbibes much moisture in wet weather, which may be pressed out in drops. It is also near *H. velutipes*, but according to the description, that species is fuscous murine in color, paler within and its spores are smaller, and no mention is made of the difference in texture of the upper and lower part of the pileus.

Hydnum vellereum *n. sp.*

Pileus nearly plane, tough, subcoriaceous, sometimes centrally uneven or colliculose, downy-tomentose, whitish or cinereous from the overspreading tomentum, or somewhat brownish-ferruginous and whitish on the margin, within fibrous, ferruginous-brown; aculei short, about one line long, white or whitish inclining to brownish-ferruginous; stem short, colored like the pileus and often covered

with a whitish tomentum; spores white, globose, minutely echinulate, .00016 in. broad.

Pileus 6 to 18 lines broad; stem 6 to 10 lines long, about 2 lines thick.

Gregarious among fallen leaves in woods. Port Jefferson. July.

This species appears to be very much like the preceding one, from which it is separated by its smaller size and the paler brownish or ferruginous-brown substance of the pileus and stem.

Hydnum spongiosipes *n. sp.*

Pileus convex, soft, spongy-tomentose, but tough in texture, ferruginous-brown, the lower stratum more firm and fibrous, but concolorous; aculei slender, 1 to 2 lines long, ferruginous-brown, becoming darker with age; stem hard and corky within, externally spongy-tomentose, colored like the pileus, the central substance often transversely zoned, especially near the top; spores subglobose, nodulose, purplish-brown, .00016 to .00024 in. broad.

Pileus 1.5 to 4 in. broad; stem 1.5 to 3 in. long, 4 to 8 lines thick.

Woods. Rensselaer and Saratoga counties. August.

This plant was formerly referred to *Hydnum ferrugineum* Fr., to which it is closely related and of which it may perhaps be a variety. But having observed it for several years I find it constantly differing from the Friesian plant as figured and described in Icones Hymenomycetum, in having the pileus convex and the stem covered with a dense spongy tomentum, colored like the pileus and quite distinct in texture from the hard central part. The figure of *H. ferrugineum* shows a depressed pileus and a stem paler in color and of a uniform texture that is without any external tomentose coating. Nor does the description ascribe such a character to the stem of the European plant.

Hydnum mirabile *Fr.*

A plant answering fairly well to the description and figure of this species was found in the sandy soil of woods near Port Jefferson. Its structure is of that peculiar character ascribed by Fries to his species, and which apparently suggested the specific name, *mirabile*. Its odor when the flesh is cut or broken, is farinaceous and its taste is also

farinaceous at first, but quickly becomes hot or peppery like the taste of acrid species of Lactarius and Russula. It is to be regretted that Fries neglected to note the flavor of species of Hydnum, for it is of value in their identification.

The substance of the stem and pileus, except the superior stratum of the latter, is brittle when fresh, but compact and slightly or lineately zoned within, a character not ascribed by Fries to his plant. It becomes hard and woody when dry. It might be called compactly fleshy when fresh and moist, and then it has some points of agreement with *H. acre* Quel. But Quelet fails to notice any difference in texture in the upper and lower strata of the pileus in his plant, a feature well shown by our specimens and strongly emphasized by Fries in the description of *H. mirabile*. For this reason we have referred our plant to *H. mirabile*, although otherwise agreeing quite well with the description of *H. acre*. The description of *H. mirabile* attributes an alutaceous color to the pileus, but the figure indicates a pale yellow color. In our plant the color varies from grayish-buff to brownish-buff. Possibly our plant may prove to be a species distinct from both.

Hydnum separans *n. sp.*

Resupinate, white; subiculum membranous, at first pure white, becoming yellowish or cream color with age; aculei subulate, glabrous, crowded, 2 to 3 lines long, fragile, easily separating from the subiculum and leaving in it alveolar impressions; spores globose, colorless, .00016 in. broad.

Much decayed wood of deciduous trees. Adirondack mountains. July.

After the teeth have been separated from the subiculum it resembles somewhat a shallow-pored species of Poria. By this character, the thinner subiculum and the smaller spores the species may be separated from *H. mucidum*, to whch it is allied.

Hydnum serratum *n. sp.*

Resupinate, white; the subiculum thin, somewhat gelatinous, livid white or bluish-tinted; aculei crowded, short, somewhat confluent in small fasciculate compact clusters, compressed, serrate on the sides and at the apex, white, sometimes slightly tinged with straw color.

Decorticated wood of spruce, *Picea Mariana.* Adirondack mountains. September.

This fungus forms patches several inches in extent. In external appearance it is suggestive of *H. Artocreas,* but it is much thinner, with shorter, more compressed and serrate teeth. This last character will also separate the species from *H. fasciculare.*

Hydnochæte *n. gen.*

Subiculum effused, submembranous, floccose-tomentose, setigerous; aculei subulate, setigerous.

A hydnoid genus of which the typical species is like a resupinate Hydnum or more nearly like *Caldesiella ferruginosa,* but it differs in having its hymenium furnished with small smooth colored setæ, which gives to the Hydnei a genus corresponding to Hymenochæte among the Thelephorei and to Mucronoporus among the Polyporei.

Hydnochæte setigera *n. sp.*

Subiculum thin, at first grayish-tawny or pale tawny, tomentulose, setigerous, the margin even and concolorous or sometimes somewhat fimbriate and whitish or grayish-white; aculei at first short, subconical, blunt, pale tawny, becoming subulate with age, about one line long, villosely setigerous, persisting through the winter and becoming ferruginous or dark ferruginous, the plant becoming stratose by the development of a new subiculum and new aculei over the old ones each year, the setæ simple or branched, .0016 to .0024 in. long, slender, sharp pointed; spores pale, subglobose or broadly elliptical, .0002 to .0003 in. long.

Decaying wood of pine, spruce and hemlock. Adirondack mountains. July to September. I have also received specimens of the first year's growth of this fungus from Professor Underwood, who collected them on the White mountains.

Although forming strata, this species must be very distinct from the plant described by Rev. M. J. Berkeley under the name *Hydnum stratosum.* In its first year it is so similar in general appearance to *Caldesiella ferruginosa* Sacc., (*Hydnum ferruginosum* Fr.) that by a careless observer it might easily be mistaken for it, but its paler color and the presence of setæ will at once separate it.

The setæ of the aculei are mostly simple and project at right angles from them, but those of the subiculum are generally longer and are often stellately or radiately branched from a common base. Rarely one or two short branches project horizontally from near the base. The plants form patches varying from several inches to several feet in extent. They begin to develop in June or July and apparently do not always become mature before September.

Radulum Pini-Canadensis *Schw.*

Bark of hemlock, *Tsuga Canadensis.* Gansevoort. August.

Odontia rimosissima *n. sp.*

Effused, very thin, determinate, crustose, adnate, abundantly rimose, at first whitish, then pallid or somewhat grayish-ochraceous; granules very minute, scarcely visible to the naked eye, subconical, distant or crowded, bearing one or several setæ at the apex; spores broadly elliptical, commonly uninucleate, .0002 to .00024 in. long, .00014 to .00016 broad.

Wood and bark of alder, *Alnus incana.* Sand Lake. November.

Coniophora subochracea *n. sp.*

Effused, membranous, the subiculum composed of whitish webby filaments; hymenium greenish-ochraceous, even or minutely papillose, finally cracking and revealing the thin subiculum and the matrix; spores numerous, broadly elliptical, colored, .00024 in. long, .00016 broad.

Decaying wood and bark in dark damp places. Menands. October.

Clavaria platyclada *Pk.*

Woods and swamps. Adirondack mountains. September.

Near *C. fusiformis,* but separated because of its flattened obtuse clubs tapering below into a whitish base.

Exobasidium Peckii *Halstd.*

Living leaves and flowers of stagger bush, *Andromeda Mariana.* Long Island. June. *F. C. Stewart.*

Phyllosticta limitata *n. sp.*

Spots orbicular, small, commonly 1 to 3 lines broad, sometimes confluent, brown or reddish-brown, sometimes becoming gray or having a grayish center, often sterile, definitely limited and surrounded by a narrow slightly elevated brown or blackish-brown margin; perithecia epiphyllous, minute, few, punctiform, black; spores elliptical, .0003 in. long, .00016 broad.

Living leaves of apple, *Pyrus Malus*. Westbury, Queens county. June. *Stewart.*

Phyllosticta Apocyni *Trel.*

Living leaves of *Apocynum androsæmifolium*. Mechanicville. July.

Dendrophoma crassicollis *S. & S.*

Dead bark of ash, *Fraxinus Americana*. Meadowdale. May.

Diplodina quercina *n. sp.*

Perithecia small, .0014 to .0016 in. broad, numerous, erumpent, black; spores narrow, subfusiform, obscurely uniseptate, .0004 to .0006 in. long, .00016 broad, usually containing 2 to 4 nuclei.

Dead twigs of oak. Jamaica. April. *Stewart.*

Pestalozzia breviseta *Sacc.*

Living leaves of apple. Port Jefferson. July.

Puccinia Prenanthis *Fckl.*

Living leaves of rattlesnake root, *Prenanthes alba*. Cedarville, Herkimer county. June. The æcidial state is *Æcidium Prenanthis.*

Æcidium Rhamni *Pers.*

Living leaves of the alder-leaved buckthorn, *Rhamnus alnifolia*. Jordanville, Herkimer county. June. The peridia in our specimens are shorter than in the type.

Æcidium Senecionis *Desm.*

Living leaves of golden ragwort, *Senecio aureus*. Cedarville. June. This is the æcidial state of *Puccinia conglomerata.*

Coleosporium Campanulæ *Wint.*

Living leaves of *Campanula rapunculoides.* Earlville, Madison county. August. *L. M. Underwood.*

Septoria Lobeliæ-syphiliticæ *Henn.*

Living leaves of *Lobelia syphilitica.* Mechanicville, Saratoga county. September. The spores in this species are larger than those of *S. Lobeliæ.*

Oidium erysiphoides *Fr.*

Living leaves of *Potentilla Norvegica.* Karner, Albany county. July. The affected plant has a very unthrifty, deformed appearance.

Œdocephalum intermixtum *n. sp.*

Fertile hyphæ erect, simple, continuous or with one or two obscure septa near the base, white, about .0003 in. thick, terminating above in a slightly inflated verrucose vesicle; spores elliptical or obovate, even, hyaline, .0005 to .001 in. long, .0004 to .0006 broad.

Dead stems of *Iris Germanica*, growing among and intermingled with *Macrosporium Iridis.*

Sporotrichum entomophilum *n. sp.*

Hyphæ very slender, .0001 in. thick, branched, forming a thin white tomentose stratum over the matrix; spores subelliptical, .00016 to .0002 in. long.

Larvæ of elm leaf beetle, *Galerucella luteola.* Albany. September. *J. A. Lintner.*

Ramularia occidentalis *E. & K.*

Living or languishing leaves of great water dock, *Rumex Britannica.* Mechanicville. September.

Ramularia cylindriopsis *n. sp.*

Hyphæ very short or but little diverse from the spores; spores very variable, elliptical oblong or cylindrical, catenulate, continuous, .0003 to .001 in. long, .00016 to .0002 broad.

Living leaves of stagger bush, *Andromeda Mariana.* Westbury, Queens county. June. *Stewart.*

The fungus occupies the whole lower surface of the leaves and it overspreads them with a white flocculent stratum of its spores. It is similar in habit to *R. effusum*, which attacks the leaves of the common huckleberry, *Gaylussacia resinosa*. It sometimes kills both leaves and twigs. It differs from *R. Andromedæ* in its shorter hyphæ, broader spores and different habit.

Verticillium enecans *Speg.*

On some unrecognized species of Marasmius. Voorheesville, Albany county. August.

The parasite completely overspreads the host plant with a thin white felty covering of its hyphæ and soon kills it.

Cladosporium caricicolum *Cd.*

Living leaves of carices. Jordanville. June.

The leaves in our specimens were attacked near the middle and so weakened by the fungus that the apical half had drooped and withered.

Heterosporium gracile *Sacc.*

Dead and languishing leaves of flower-de-luce, *Iris Germanica*. Menands. September.

Phragmotrichum Chailletii *Kze.*

Cone scales of white spruce, *Picea Canadensis*. Minerva, Essex county. July. I am not aware that this interesting and peculiar fungus has before been detected in this country.

Macrosporium Iridis *C. & E.*

Dead flower stems of flower-de-luce, *Iris Germanica*. Menands. September.

Macrosporium Amaranthi *Pk.*

Living leaves of goose-foot, *Chenopodium album*. Mechanicville, Saratoga county. October. (Bull. Torr. Bot. Club, Vol. 22, p. 493, 1895.)

Septonema toruloideum *C. & E.*

Decaying pine wood. Menands. October.

Entyloma Veronicæ (*Halst.*) *Lager.*

Living leaves of American speedwell, *Veronica Americana.* Jordanville. June.

Peronospora calotheca *De By.*

Living leaves of *Galium triflorum.* Cedarville, Herkimer county. June.

The leaves of badly infested plants have a starved appearance and do not attain their usual size, and the plant itself is small and discolored.

Exoascus Cerasi (*Fckl.*) *Sadeb.*

Living leaves of sweet cherry, *Prunus Avium.* Westbury, Cutchogue, Queens, Floral Park and Flatbush, Long Island. May. *Stewart.*

Peziza subumbrina *Boud.*

Black muck soil in woods. Mechanicville. July. The spores in our specimens are binucleate. They are at first smooth, but they become verrucose with age.

Spathularia rugosa *n. sp.*

Club compressed, rugose, oblong, obovate or spatulate, sometimes irregular or long decurrent, pale yellowish; stem subequal, subterete, often minutely pruinose-tomentose or subvelvety, especially toward the base, whitish or pallid; asci clavate, gradually tapering below into the very short stem, .003 to .004 in. long, .0004 to .0005 broad; spores filiform, .0016 to .0024 in. long, about .00008 broad; paraphyses filiform very slightly thickened at the top and more or less curved.

Growing in circles under or near coniferous trees. Old Forge, Herkimer county. August.

In size and color this fungus is very much like *S. flavida* Pers., to which it was referred as variety *rugosa* in Report 39, p. 58.

It differs from that species in its very rugose club, its rather shorter spores, its habit of growing in circles and in the less glabrous stem. Possibly it may not be distinct from *S. crispata* Fckl., which was erroneously referred to *S. crispata* Fr., according to Sylloge. The description of Fuckel's plant is too brief to be satisfactory.

Admitting the specific value of this plant and of *S. velutipes* and substituting for *S. flavida* the earlier name *S. clavata* Schæff., which is adopted in Sylloge, we have three New York species. In the annexed table their differentiation is indicated.

	Stem whitish or pallid	1
	Stem bay or bay-brown	S. velutipes.
1	Club even or wavy	S. clavata.
1	Club rugose	S. rugosa.

Cenangium Abietis (*Pers.*) *Rehm.*

Dead bark of white pine, *Pinus Strobus*. Delmar, Albany county. August.

Diaporthe decipiens *Sacc.*

Dead branches of water beech, *Carpinus Caroliniana*. New Baltimore, Greene county. June.

Phyllachora Junci (*Fr.*) *Fckl.*

Dead stems of slender rush, *Juncus tenuis*. Cedarville, Herkimer county. June.

Xylaria castorea *Berk.*

Prostrate trunks of beech, *Fagus Americana*. Adirondack mountains. September.

(D.)

REMARKS AND OBSERVATIONS.

Nymphæa reniformis *DC.*

Great South Bay, near the head of Lake Champlain. *S. H. Burnham.* This station extends the known range of the species northeastward.

Corydalis glauca *Pursh.*

A white-flowered form was found growing with the common form on the summit of Altar or Cobble mountain, near Lake Placid.

Nasturtium sylvestre *R. Br.*

Banks of the Genesee river near the southern and also near the northern boundary of the city of Rochester. Collected by *Mrs. J. H.*

McGuire; communicated by *Mr. J. B. Fuller*. The yellow cress is an introduced and sparingly naturalized plant. Specimens were collected several years ago near Flushing, Long Island.

Lepidium campestre *Br.*

The field pepper grass is an introduced species, which is gradually spreading through the State, and is attracting some attention as a pernicious weed. Mr. Fuller sends specimens with the following note: "It is frequent in grain fields in the western part of Monroe county, where it is locally known as 'long John.' It is rarely observed in the eastern part of the county."

Arenaria Grœnlandica *Spreng.*

Unusually large specimens of this plant were collected near Lake Mohonk, Ulster county. They were still flowering early in October.

Silene antirrhina divaricata *Robinson.*

Dry rocky woods. Lansingburg. July. The branches in our specimens are widely spreading and the flowers apetalous.

Tilia pubescens *Ait.*

Near Riverhead, Suffolk county. July. Our specimens are from the same source as those mentioned in Sargent's Trees of North America, as coming from this locality. The station was discovered by *Mr. E. S. Miller*.

Tilia heterophylla *Vent.*

Camillus and Marcellus Station, Onondaga county. June. This indicates a more northern range for the species than has hitherto been attributed to it. The flower buds had not yet opened when the specimens were collected.

Flœrkea proserpinacoides *Willd.*

The false mermaid is rare in the eastern part of our State and in the New York Flora it is credited to the western part only. There is, however, a station in a low piece of woods near Meadowdale, Albany county, in which it grows in considerable abundance.

Euonymus atropurpureus *Jacq.*

Banks of the Genesee river at Glen Iris, Wyoming county. June.

Fragaria Virginiana *Mill.*

The wild strawberry is a variable plant and indicates in the fields its tendency to run into numerous varieties. Near Meadowdale a form was found bearing flowers scarcely more than half the usual size. These small flowers are followed by very small fruit. The breadth of the receptacle of the flower indicates in some degree the size of the resulting fruit. From a broad receptacle we would expect a large fruit, from a narrow one, a small fruit. Possibly some of the forms referred to this species will yet be shown to be distinct species.

Zizia cordata *DC.*

A form with the radical or basal leaves trifoliate was found growing with the ordinary form in the borders of woods near New Baltimore, Greene county. In one or two instances both entire and trifoliate basal leaves were found on the same plant.

Viburnum lantanoides *Mx.*

The hobble bush is one of the prevailing shrubs of the Adirondack forests. Wherever we go in this mountainous region we find it extending its long horizontal branches as if to welcome us to its forest home with outstretched arms, but really to impede our steps, for the interlocking of the branches of neighboring plants or the rooting at the tip of an occasional deflexed branch makes traveling difficult and sometimes causes a trip and a fall.

This shrub is generally three or four feet high and bears a few horizontally spreading branches which are nearly as long as the parent stem. But plants were noticed the past summer in the southern part of Essex county between the Boreas and Hudson rivers that were ten feet high. These tall individuals generally had shorter and more numerous branches than their more lowly neighbors, and these were ascending in direction, diverging from the stem at a smaller angle than usual. In searching for the cause of this excessive and peculiar growth it was found that these tall specimens generally grew in

clumps or clusters of several individuals or else were closely crowded by other shrubs or small trees. In either case the tendency would be to stimulate an upright growth in the effort of the plant to get into more and better light, and to retard or hinder the horizontal growth of the branches. The result is seen when trees grow close to each other in groves or forests. They grow taller and have more slender elongated trunks than when they grow singly or widely scattered in open fields. A fertile soil and a constant supply of the necessary moisture are doubtless contributing conditions. This plant evidently delights in the shade of trees and therefore in a constantly though perhaps a moderately moist soil, for it quickly disappears when the trees are cut away and it is exposed to the full rays of the sun.

Symphoricarpos vulgaris *Mx.*

The Indian currant or coral berry is not common in our State. There is a station for it near Newtonville, the only one known to me in Albany county. Possibly the plants have been introduced there from some western locality.

Aster sagittifolius *Willd.*

The arrow-leaved aster is credited in the New York Flora to Yates county. It is now quite plentiful in the northern part of the Hudson river valley. It is found about Mechanicville and extends northward to Bemus Heights. It has also been collected by Mr. Burnham near Sandy Hill, Washington county, and probably occurs in intermediate localities.

Solidago puberula *Nutt.*

"Sandy soil, Maine to Virginia and southward, mostly near the coast," is given in the Manual as the habitat and range of this species. In our State it frequently occurs in gravelly soil and in rocky places in the mountains remote from the seacoast. It has been found on the Shawangunk mountains in Ulster county, among the Catskill mountains and in the Adirondack mountains. It has been sent from rocky places in St. Lawrence county by Mrs. Anthony and from rocky hills near Fort Ann, Washington county, by Mr. Burnham. In these plants the hoary puberulence of the typical form is scarcely noticeable and the achenes have a few scattered hairs on the upper part, otherwise I see no distinct variation from the typical form.

Pyrola uliginosa *T. & G.*

In the Manual this plant is considered as a mere variety of *P. rotundifolia*. But having seen living specimens in the Mud lake locality in the southern part of Herkimer county, where it was discovered by Mr. Paine many years ago, I am disposed to consider it a distinct species and would restore it to the place assigned it by Dr. Torrey in the New York Flora. Its habitat is peculiar and its flowers are beautiful.

Pyrola secunda pumila *Gr.*

The peaty bog at the east end of Mud lake is still a station for this very small or dwarfish pyrola. It was found here by Mr. Paine more than thirty years ago. The same variety occurs in the Adirondack mountains, where it passes into the typical form.

Ilex monticola *Gr.*

Lake Mohonk, Ulster county. Few localities in the State are richer in botanical novelties and rare species of plants than this. It seems to be common ground where mountain loving species from the north and from the south meet and intermingle.

Symphytum officinale *L.*

Roadsides. Pike, Wyoming county. June. The purplish-flowered form.

Myosotis palustris *With.*

This introduced plant is abundant along Ilion creek between Ilion and Cedarville.

Phlox subulata *L.*

This early flowering, highly ornamental and sometimes cultivated plant was formerly abundant on the west bank of the Genesee river three and a half miles from its mouth. It is still found on the east bank. It occurs also at Caledonia, Livingston county. *Fuller.*

Gerardia flava *L.*

A singular form of this plant was collected near Port Jefferson. It has three leaves at each node of the stem.

Rumex crispus *L.*

Mr. Fuller sends specimens of a Rumex collected near Rochester, in a field locally known as the Riley lot. According to his notes and the characters exhibited by the specimens, the plants are from four to six feet high, which is nearly twice the hight of the ordinary *R. crispus* growing in the same field. Its leaves are smoother and more fleshy, paler, less veiny and less crisped on the margin than those of the yellow dock which they otherwise resemble. Its panicles are paler and the fruit valves are larger and more rounded with commonly only one of them grain-bearing. They are entire or but slightly toothed on the margin. The plants begin to blossom four or five weeks earlier than *R. crispus*, but they ripen few or no seeds, nearly all the flowers being abortive and falling about the first week in July. This indicates that the plants are hybrids. A hybrid of *R. crispus* and *R. obtusifolius* is known and was reported by Professor Dudley in his Catalogue of Plants of Cayuga Valley, but the specimens from Rochester do not agree with the description given of that hybrid, and the tall growing plants and the broad rounded valves without conspicuous teeth on the margin and commonly only one grain-bearing indicate rather a hybrid between *R. crispus* and *R. Patientia.*

Arceuthobium pusillum *Pk.*

This parasite on the spruce has been found by M. A. Baxter as far west as Rochester.

Hicoria alba (*L.*) *Britton.*

The mocker nut, (*Carya tomentosa* Nutt.) is common enough on Long Island and in the southern part of the State, but in other parts it is either wholly absent or occasional in its occurrence. The local catalogues of plants do not record it in the western part of the State. It is credited to Oneida county on the authority of Knieskern and is mentioned as "scarce" in the Catalogue of Plants of Schenectady county. It occurs near Cedar Hill, Albany county, which is the most northern station in which I have seen it.

Quercus macrocarpa *Mx.*

The form of this oak recognized by Michaux as a distinct species, and to which he gave the name *Quercus olivæformis*, is now generally

regarded by botanists as a mere form or at most a mere variety. It was admitted into the New York Flora by Dr. Torrey on the authority of Michaux. He gave as its locality, "banks of the Hudson above Albany and in the western part of the State." Since that time it has been reported from Glenville, Schenectady county, by Professor Pierson and from Dexter, Jefferson county, by Dr. Vasey. In August a single tree of it was discovered by myself near Mechanicville, Saratoga county. This discovery is more interesting because of the proximity of this tree to one of the localities mentioned by Michaux, and because of the possibility that this very tree may be a lineal descendant of one of the trees observed by him. Recently a specimen of the same variety has been sent to us by Dr. Vandenburg, who collected it near Fort Edward.

Picea Canadensis (Mill) *B. S. P.*

The white spruce (*Picea alba* Lk. of the Manual) occurs in Minerva, Essex county. This is the most southern station in which I have seen it. Some of the old cones still remained on the tree in July, but the ground under the tree was well strewed with fallen cones and the attachment of those remaining on the tree was very slight and easily broken. The bark of this tree contains blisters or resin reservoirs similar to those of the balsam, *Abies balsamea,* but they are less prominent and less numerous. The resin in them is scarcely distinguishable in color, consistency or flavor from that of the balsam.

Besides the white spruce and the black spruce we have in the State a third form, which may be a variety of the black spruce. I have observed it in the swamps and on the mountains of the Adirondack region and elsewhere. It has the slender twigs, glabrate sterigmata and small cones ascribed to *Picea rubra,* but I hesitate to report it as that species, because the cones have the persistency ascribed to those of the black spruce. The foliage generally has the silvery green hue of the foliage of the balsam. The leaves are generally shorter than those of the black spruce and are not more acute. The tree is of very slow growth and very flexible. The question in my mind is whether it should be considered a variety of the black spruce or a distinct species.

Habenaria hyperborea *R. Br.*

The great variability of this species is recognized in the New York Flora, but no effort seems to have been made to classify the varieties. In the marshes and cedar swamps about Jordanville, three well marked forms occur.

In one the plants are two or three feet high, with a stem six to ten lines thick, with broad leaves and a dense spike of spreading flowers. This is the largest and stoutest form.

In another the plants are generally about a foot high, with a rather slender stem and narrow leaves, but with a dense spike of spreading flowers.

In the third form the plants are eight to twelve inches high, the stem slender, the leaves narrow and the spike loose and slender, with erect or appressed flowers.

Corallorhiza multiflora *Nutt.*

A variety of this species has occurred in woods at Menands, Albany county, in which nearly the whole plant has a pale yellow color, the lip of the flower being white and unspotted. This is such a wide departure from the ordinary form that I have labeled our specimens *Corallorhiza multiflora flavida.*

Cyperus esculentus *L.*

The yellow nut grass sometimes penetrates the tubers of the potato by its sharp pointed rootstocks and develops its tubers in the tubers of the host. Specimens of this kind were brought to me by Mr. Van DeLoo, of the State Museum. One of the invading tubers was planted and it developed into a fine specimen of *Cyperus esculentus.*

Carex castanea *Wahl.*

This rare and interesting sedge still lingers in small quantity under the hemlocks on the eastern shore of Cedar lake, in the southern part of Herkimer county. Its first discovery in this country was made here by Professor Gray more than sixty years ago. At the time of my visit to this place men were busy cutting the hemlock trees and

peeling the bark from their trunks, and I fear very much that the changed conditions thus induced will soon cause the disappearance of these rare plants from this historic locality.

Carex Schweinitzii *Dew.*

More than thirty years ago Rev. J. A. Paine detected this rare sedge in the swamp near Cedarville. It still exists there, growing in the edge of the swamp in a springy place at the foot of a hill. It was found by myself in a similar locality near Pike, Wyoming county, in June.

Carex livida *Willd.*

In the Catalogue of Oneida county plants this sedge is reported as abundant on the State marsh in Litchfield, Herkimer county. A recent visit to this locality failed to reveal more than a few poorly developed specimens. The indications are that this rare species will soon disappear entirely from this locality.

Carex filiformis *L.*

This sedge sometimes assumes a sort of diœcious character. On one of the marshes in Litchfield, Herkimer county, some plants bore only staminate spikes; others bore only a single pistillate spike. But in the same locality other plants bore both staminate and pistillate spikes as usual.

Carex teretiuscula prairea *Britton.*

This is the prevailing form of the species in all the cold "cedar swamps" in the towns of Litchfield and Warren in the southern part of Herkimer county. The typical form of the species occurs in more open and less boggy places. Specimens collected in Albany county many years ago have the spikes on still longer branches, and thus appearing more conspicuously panicled. This is *Carex prairea* Dew. and *C. teretiuscula ramosa* Boott.

Festuca duriuscula *L.*

Wet, dripping cliffs along the Genesee river at Portage. The specimens were collected near the high bridge of the N. Y. & L. E. Railroad, on the west side of the river. The culms are rather slender,

often geniculate at the base and about two feet tall. The lower sheaths are hairy or downy, and the upper surface of the cauline leaves are minutely hairy along the veins. The basal leaves are involute and eight to ten inches long. The habitat is so peculiar that I suspect the plants are indigenous in this locality. They certainly seem to me to be specifically distinct from *Festuca ovina*, to which, in the Manual, this species is added as a variety. The plants have no running rootstocks.

Elymus striatus *Willd.*

Dry rocky woods. Menands and Cedar Hill, Albany county. July. Our plants belong to the variety *villosus* Gray, *Elymus villosus* Muhl. of the New York Flora.

Tricholoma terreum fragrans *Pk.*

Poughkeepsie. October. *H. W. Barratt.* Mr. Barratt writes that many hundred specimens of this mushroom grew in a patch about twenty feet square, yet not as many as in the fall of 1894. There were none in 1895. He regards it as a valuable mushroom on account of its late appearing, its freedom from insect attack, its durability and fine flavor. It is especially good roasted and eaten on dry buttered toast or on milk toast. In his opinion many mushrooms are better roasted than cooked in other ways.

Clitocybe vilescens *Pk.*

A pale form of this species grows on sandy soil, in which the pileus is smoky white, but it becomes grayish-brown in drying. The mycelium binds together a mass of sand, so that when the plant is taken up carefully a little ball of sandy soil adheres to the base of the stem. The stem is sometimes pruinose. The flavor is mild and agreeable.

Clitocybe amethystina *Bolt.*

This fungus has commonly been united with *C. laccata* as a variety, though sometimes the remark is added that perhaps it is a distinct species. So far as I have observed it, its colors constitute the chief difference between the two, but these are very constant. I have seen no connecting forms. *C. laccata* has been made the type of a new

genus Laccaria by Berkeley and Broome, with the following characters: Pileus convex then umbilicate or depressed, flesh thin; lamellæ broadly adnate, sometimes with a decurrent tooth, becoming mealy with the copious subglobose minutely warted white spores; stem central, externally fibrous; veil not evident.

If this genus is accepted, *Clitocybe ochropurpurea* Berk. and *C. tortilis* Bolt. should be referred to it. *C. trullisatus* Ellis is closely allied to these in general characters and appearance, but must be excluded because its spores are oblong and smooth.

Then admitting the specific validity of *C. amethystina*, we have four species that should be included in it. The species may be recognized by the characters indicated in the subjoined table.

	Stem more than 4 lines thick	L. ochropurpurea.
	Stem less than 4 lines thick	1
1	Moist pileus obscurely violaceous or watery brown, lamellæ amethystine	L. amethystina.
1	Moist pileus rufescent tinged with yellow or flesh color, lamellae flesh color	2
2	Stem commonly longer than the width of the pileus, 1 to 4 in. long	L. laccata.
2	Stem commonly shorter than the width of the pileus, 4 to 10 lines long	L. tortilis.

Pholiota unicolor *Vahl.*

Specimens of this species were found near Jordanville as early as June. They were growing on moss-covered decaying wood. The resemblance between this species and some forms of *Clitocybe laccata* is quite strong. The color of its spores and the presence of a membranous annulus will at once preclude any confusion of the two species. The stem sometimes has a very evident white mycelioid tomentum at its base.

Pholiota angustipes *Pk.*

This plant is of rare occurrence. It was discovered in 1876. The past season it was found in Albany county. The pileus varies in color from brown to gray or grayish-brown. It is slightly viscid when moist. The veil is slight and often its fragments adhere entirely to

the margin of the pileus, leaving the stem without an annulus. Were it not for the rusty tint to the spores such specimens might easily be referred to the genus Hypholoma.

Lactarius aquifluus *Pk.*

This plant is sometimes cæspitose. The pileus when dry is tawny-gray and squamulose or rimulose-squamulose. The margin may be even or coarsely sulcate-striate. The flesh is grayish or reddish-gray. The color of the lamellæ varies from creamy-white to tawny-yellow. The stem often has a conspicuous white mycelioid tomentum at its base. I have never found this plant with a white or milky juice, and therefore I am disposed to regard it not as a variety of *L. helvus*, but as a distinct species. Its mild taste and agreeable odor suggested a trial of its edible qualities. It is harmless, but the lack of flavor induces me to omit it from the list of edible species.

Galera tenera *Schæff.*

A notable form of this species was found growing in an old stable of an abandoned lumber camp. The plants were large, the pileus in some being more than an inch broad, the stems were three to six inches long and the color was ferruginous as in *G. ovalis*, to which the plants might be referred but for the large spores. Essex county. July. I have labeled the specimens variety *obscurior*.

Cortinarius violaceus *Fr.*

Minerva, Essex county. A form of this species occurs here, having the pileus merely downy or punctate-hairy under a lens, no squamules being distinguishable by the naked eye. July.

Panæolus retirugis elongatus *n. var.*

Pileus grayish-brown, 1 to 1.5 in. broad; stem straight, 5 to 7 in. long.

Growing with *Galera tenera obscurior* in an old stable of an abandoned lumber camp, near Minerva, Essex county. July.

The stems were often coated toward the base with a grayish-white tomentum.

Coprinus plicatilis *Fr.*

Chip dirt, about an old lumber camp, Township 24, Franklin county. September.

The lamellæ sometimes show a whitish edge and whitish dots on the sides. These are due to projecting cells of cystida. There is a sterile form in which the pileus is paler than in the fertile form, and the lamellæ are persistently whitish. The lamellæ are free and sometimes the free space about the stem ruptures in such a way as to give them the appearance of being attached to a free collar. The spores are broadly ovate and compressed, so that the transverse diameter is greater when the spore lies flat than when it lies on its edge. They are .00045 to .0005 in. long, .0003 to .0004 broad.

Cantharellus aurantiacus pallidus *Pk.*

Specimens of this variety were found growing from the dead trunk of a standing pine tree. The stem in some instances was eccentric. The yellowish pileus sometimes has the margin almost white. The lamellæ are frequently crisped or wavy.

Cantharellus cinereus bicolor *n. var.*

Pileus and stem pale cinereous or grayish; hymenium yellowish, its folds very narrow. Menands. August.

Lenzites betulina rufozonata *n. var.*

Pileus brown, grayish-brown or tawny-brown, with one or more reddish subglabrous zones. Ulster and Saratoga counties. September and October.

Russula Mariæ *Pk.*

This fungus appeared in considerable abundance the past summer near Albany and at Port Jefferson. It is well marked by the pruinose appearance of its pileus and the minute reddish or purplish granules which when wet cause a stain upon any white surface or paper which may lie in contact with the pileus. The margin is even, but sometimes becomes slightly striate in old age. The flesh is white, but is often slightly red or pinkish under the cuticle, which is separable, at least on the margin. The lamellæ are entire and the inter-

spaces venose. The stem is sometimes white, but generally it is colored like the pileus or a little paler. There are several species which have the pileus similarly colored, among which are *R. purpurea* Gill., *R. Queletii* Gill., *R. expallens* Gill. and *R. drimeia* Cke., but from all these, which are acrid, it is distinct by its mild taste. Sometimes the margin of the pileus fades with age and then the appearance is very similar to that of *R. depallens* Fr. as shown by the figures in Illust. of British Fungi, plate 1021. But that species has a viscid pileus and the stem varies from white to cinereous. It has not the red or purplish hues of the stem of our plant.

Hydnum albidum *Pk.*

Port Jefferson. July. This fungus has been tested and found to be edible.

Hydnum Caput-ursi *Fr.*

This species is not rare in the Adirondack forests. It grows on old trunks of deciduous trees either prostrate or standing and sometimes attains a large size, being six or eight inches high and nearly as broad, with aculei an inch long. Small forms have shorter teeth and might easily be mistaken for *H. coralloides* if not carefully observed. I have eaten of it and find it very good, but scarcely as well-flavored as *H. coralloides.*

Thelephora laciniata *Pers.*

A form of this species in which the margin of the pileus is entire is not rare. To distinguish it from the typical form it might be called variety *integra.*

Stereum spadiceum plicatum *n. var.*

Pileus narrow, laterally confluent, much crisped or folded. Prostrate trunks of oak, *Quercus alba.* Menands. August.

Anthurus borealis *Burt.*

In an asparagus bed. Sherruck, Delaware county. August. *F. B. Southwick.*

This is the second time and the second locality in our State in which this very rare and interesting phalloid fungus has been found. Successive crops of it appeared in this place during an interval of several weeks.

Xylaria digitata (*L.*) *Grev.*

Prostrate trunks of maple, *Acer saccharinum.* Adirondack mountains. September.

This species is quite variable. Specimens growing in the same group and under the same conditions had the stroma terete or compressed, simple or divided above into two or more branches, or two or more would be united at the base only as if growing from a single starting point. Occasionally two clubs are confluent or grown together throughout their entire length. The apex may be either rather bluntly acute or acuminate and sterile, but sometimes it is obtuse. The stem may be either short or long and wholly glabrous or at the very base involved in mucedinous tomentum. The clubs in our specimens were very fragile when fresh.

Var. *tenuis* n. var. Clubs slender, 1 to 1.5 lines thick, with the sterile apex commonly more conspicuous; perithecia less crowded and more prominent; stem elongated, commonly flexuous.

This variety was found growing on the same trunk with the ordinary form but lower down on the sides and partly beneath, and probably depends chiefly on its place of growth for its peculiar development. The spores both in it and in the typical form are .0007 to .0009 in. long.

Var. *Americana* differs chiefly in its shorter spores, which are about .0005 in. long. This is our most common form and the dimensions of its spores are given in the work on North American Pyrenomycetes as representing the spores of the species in this country. It may be a question whether this fungus would better be considered a variety of *X. digitata* or a distinct species.

(E.)

NEW YORK SPECIES OF FLAMMULA.

Flammula *Fr.*

Pileus fleshy, its margin at first involute; lamellæ decurrent or adnate without a sinus; stem fleshy-fibrous, not mealy on the upper part; veil fibrillose or none.

The genus Flammula is not represented in our territory by a large number of species. It is, nevertheless, not very sharply distinct from

the allied genera, Pholiota, Hebeloma and Naucoria. From Pholiota it is especially separated by the slight development of the veil which is merely fibrillose or entirely wanting. It never forms a persistent membranous collar on the stem. From Hebeloma it may be distinguished by the absence of a sinus at or near the inner extremity of the lamellæ, by the absence of white particles or mealiness from the upper part of the stem and by the brighter or more distinctly ferruginous or ochraceous color of the spores. From Naucoria the fleshy or fibrously fleshy stem affords the most available distinguishing character. The genus belongs to the Ochrosporæ or ochraceous spored Series, but the spores of its species vary in color from ochraceous or tawny-ochraceous to ferruginous or fuscous-ferruginous. The three things to be especially kept in mind in order to recognize the species are the color of the spores, the adnate or decurrent but not clearly sinuate lamellæ and the fleshy or fibrously fleshy stem without a membranous annulus.

Our species are mostly of medium size, none being very small and one only meriting the appellation large. They appear chiefly in late summer or in autumn and grow in woods or in wooded regions either on the ground or more often on decaying wood. Many are gregarious or cæspitose in their mode of growth. Some have a bitterish or unpleasant flavor and none of our species has yet been classed as edible. Fries arranged the species in five groups, of which the names and more prominent characters are here given:

Gymnotæ. Pileus dry, often squamulose; veil none; spores ferruginous.

Lubricæ. Pileus viscose, glabrous, the pellicle subseparable; veil fibrillose; spores ferruginous or fuscous-ferruginous.

Udæ. Pileus moist or slightly viscid in rainy weather, glabrous, the cuticle not separable; veil evident, appendiculate.

Sapineæ. Pileus not viscose; lamellæ at first yellow or yellowish; veil almost none or fibrillose, not appendiculate; spores tawny or ochraceous.

Sericellæ. Pileus dry or at first viscid, slightly silky.

At present, no representatives of the first and the last tribes are known to belong to our State. The three remaining tribes are repre-

sented by twelve species, but three of these are so closely allied respectively to three others that they might easily be regarded as mere varieties rather than as distinct species. An analytical table is here given to facilitate the tracing of the species to their respective names:

	Pileus viscose, the cuticle separable	1
	Pileus moist, glabrous, cuticle not separable	6
	Pileus dry	9
1	Pileus commonly obscurely spotted, stem solid	2
1	Pileus not spotted; stem stuffed or hollow	3
2	Pileus paler on the margin, flesh white	lubrica.
2	Pileus uniformly colored, flesh grayish-white	subfulva.
3	Stem fibrillose	4
3	Stem squamulose or floccose-squamulose	5
4	Pileus paler on the margin, flesh yellowish	spumosa.
4	Pileus uniformly colored, flesh whitish	squalida.
5	Pileus 1 inch or more broad, flesh yellow	carbonaria.
5	Pileus 1 inch or less broad, flesh whitish	Highlandensis.
6	Pileus not hygrophanous	7
6	Pileus hygrophanous	8
7	Pileus yellow, slightly silky on the margin	alnicola.
7	Pileus pale yellow, margin naked	flavida
8	Stem reddish-brown	Halliana.
8	Stem not reddish-brown	rigida.
9	Pileus buff, fibrillose-virgate	magna.
9	Pileus golden-tawny, flocculose-squamulose	sapinea.

Lubricæ.

Pileus covered with a viscose glabrous wholly or partly separable cuticle; veil fibrillose; spores ferruginous or fuscous-ferruginous.

Flammula lubrica *Fr.*

SLIMY FLAMMULA.

Hym. Europ. p. 246. Syl. Fung. Vol. V. p. 815.

Pileus fleshy, somewhat tough, convex becoming plane or sometimes slightly depressed, even, viscose, often adorned with a few inconspicuous appressed spot-like scales, yellowish-red or tawny with a paler or yellowish margin, flesh white; lamellæ close, adnate or slightly decurrent, at first pallid or dingy clay color becoming subferruginous; stem equal or slightly tapering upward, solid, fibrillose

or somewhat flocculose-squamulose below, often striate at the top, whitish with a white mycelioid tomentum at the base; spores dark ferruginous, .00024 in. long, .00016 broad.

Pileus 1.5 to 3 in. broad; stem 1.5 to 4 in. long, 2 to 5 lines thick.

Decaying wood and ground among fallen leaves. Catskill and Adirondack mountains.

Sometimes the pileus is slightly umbonate and its margin appendiculate with the remains of the white floccose-fibrillose veil. The spots are due to the presence of more highly colored innate fibrils. The stem is often flexuous. It sometimes becomes a little brownish or ferruginous toward the base when old. The Adirondack specimens were found growing on decaying spruce wood.

Flammula subfulva *Pk.*

DINGY-TAWNY FLAMMULA.

Mus. Rep. 41, p. 68.

Pileus convex, viscid, innately fibrillose, spotted toward the margin with darker colored appressed scales, sordid-tawny, flesh grayish-white; lamellæ close, adnate, becoming ferruginous; stem equal or slightly tapering upward, fibrillose, solid, whitish; spores brownish-ferruginous, elliptical, uninucleate, .00024 to .0003 in. long, .00016 broad.

Pileus 1.5 to 2.5 in. broad; stem 2 to 3 in. long, 2 to 4 lines thick.

About the base of trees. Catskill mountains. September.

The plant is more or less cæspitose in its mode of growth. It has been found but once. It is so closely allied to the preceding species that it might easily be regarded as a mere variety of it. The differences are found chiefly in the uniformly colored pileus and its grayish-white flesh.

Flammula spumosa *Fr.*

FROTHY FLAMMULA.

Hym. Europ. p. 247. Syl. Fung. Vol. v. p. 817.

Pileus fleshy, thin, convex or nearly plane, obtuse or umbonate, glabrous, viscose, pale yellow, tinged with reddish tawny or brownish hues in the center, flesh pale yellow or greenish-yellow; lamellæ thin, close, adnate, pale yellow when young, becoming ferruginous;

stem rather slender, equal or tapering at the base, fibrillose, hollow, yellowish, generally becoming brownish or ferruginous toward the base; spores elliptical, dark ferruginous, .0003 in. long, .00016 to .0002 broad.

Pileus 1 to 2 in. broad; stem 1.5 to 3 in. long, about 2 lines thick.

Gregarious or cæspitose; growing on the ground or on decaying wood. August and September.

This is our most common species of Flammula. It is found especially in hilly or mountainous districts, either in woods or open places. The pileus varies in the color of its center or disk from reddish to brownish. The umbo is sometimes present and very distinct, but it is often wholly absent. Occasionally the pileus becomes depressed in the center and then its margin is apt to be irregular, repand or wavy. It is a beautiful fungus when clean and well developed. Specimens, which in Report 23, p. 91, were referred to *Agaricus polychrous*, are probably only a form of this species. Satisfactory specimens of *Ag. polychrous* have not yet been found in our State.

Flammula squalida *Pk.*

SQUALID FLAMMULA.

Mus. Rep. 44, p. 19, auct. ed.

Pileus fleshy, convex or plane, firm, viscose, glabrous, dingy-yellowish or rufescent, flesh whitish but colored similar to the pileus under the separable cuticle; lamellæ rather broad, adnate, pallid, becoming dark ferruginous; stem slender, generally flexuose, hollow, fibrillose, pallid or brownish, pale yellow at the top when young; spores brownish-ferruginous, .0003 in. long, .00016 broad.

Pileus 1 to 1.5 in. broad; stem 1.5 to 3 in. long, 1 to 2 lines thick.

In bushy and swampy places. Cattaraugus and Rensselaer counties. September.

This species is closely related to *F. spumosa*, of which, perhaps, some may prefer to consider it a variety. But having observed it several times in different localities and always finding it constant in its characters and readily distinguishable, it has seemed best to recognize it as a distinct species. Its dingy appearance, slender habit,

more uniform and darker color of the pileus and darker color of the mature lamellæ and spores are its peculiar features. It is often very cæspitose and is found especially among alder bushes in swamps.

Flammula carbonaria *Fr.*

BURNT GROUND FLAMMULA.

Hym. Europ. p. 247. Syl. Fung. Vol. v. p. 817.

Pileus fleshy, thin, convex or nearly plane, even, glabrous, viscid, subtawny, flesh yellow; lamellæ broad, adnate, crowded, brownish-clay color; stem equal or tapering downward, slender, rigid, narrowly fistulose, fibrillose-squamulose, pallid; spores brownish-ferruginous, .0003 to .0004 in. long, .00016 to .0002 broad.

Pileus 1 to 2 in. broad; stem 1 to 2 in. long, 2 to 3 lines thick.

Burnt ground and charcoal beds. Rensselaer county. June. Rare.

European authors do not agree as to the dimensions of the spores of this species. In Sylloge they are given as 10 to 11 x 5 to 6. In British Fungus Flora, as 7 x 3.5. Fries describes the pileus as one inch or a little more in width, but Cooke represents it as much broader, sometimes reaching three inches in diameter. The only specimens we have ever seen that agree tolerably well with the description of the European plant were found growing on ground where wood had been burned into charcoal a short time before.

Flammula Highlandensis *Pk.*

HIGHLAND FLAMMULA,

Agaricus Highlandensis, Mus. Rep. 24, p. 67.

Pileus fleshy, thin, hemispherical or convex, becoming nearly plane, glabrous, viscose, yellowish-red, commonly paler or yellowish on the inflexed margin, flesh white or whitish, sometimes tinged with yellow under the tough separable cuticle; lamellæ close, rounded behind or adnate, sometimes with a decurrent tooth, pallid or yellowish when young, becoming ferruginous; stem equal, stuffed or hollow, fibrillose and minutely floccose-squamulose, yellowish; spores elliptical, .00024 to .0003 in. long, .00016 broad.

Pileus 6 to 12 lines broad; stem 1 to 1.5 in. long, 1 to 2 lines thick.

Burnt ground or damp earth. Highlands of Orange county, Catskill mountains and Adirondack mountains. June to September.

From *F. carbonaria*, of which it may perhaps be a mere variety, this is separated by its smaller size, whitish flesh and differently colored lamellæ. The margin of the pileus is often paler than the central part. The surface is usually more or less defiled by dirt or other adhering substances that have been carried up in the growth of the plant. The mycelium commonly binds together a little ball of earth which clings to the bottom of the stem when the plant is pulled from the ground. *Agaricus Ascophorus* is merely a form of this species with the squamules of the stem wanting or inconspicuous.

Udæ.

Pileus moist or slightly viscid in rainy weather, glabrous, the cuticle not separable; veil evident, appendiculate.

Flammula alnicola *Fr.*

ALDER FLAMMULA.

Hym. Europ. p. 248. Syl. Fung. Vol. v. p. 820.

Pileus fleshy, at first broadly conical or convex, then broadly convex or nearly plane, glabrous or sometimes slightly silky-fibrillose on the margin, clear lemon yellow, rarely tinged with ferruginous in the center, moist, flesh yellowish, taste bitter; lamellæ close, adnate or sometimes slightly rounded behind, pallid or yellowish becoming ferruginous; stem rather long, often curved or flexuose, fibrillose, hollow, yellowish becoming ferruginous or brownish-ferruginous especially toward the base; spores ferruginous, .0003 to .0004 in. long, .0002 to .00024 broad.

Gregarious or cæspitose; pileus 1 to 2.5 in. broad; stem 2 to 3 in. long, 2 to 4 lines thick.

Ground or decaying wood of deciduous trees. Albany and Rensselaer counties, Catskill and Adirondack mountains. September and October.

The Alder flammula is a beautiful fungus. The color of the pileus is generally a uniform bright lemon yellow but sometimes it assumes

deeper hues and may be tinged with ferruginous in the center. The margin is generally adorned with pale yellow or whitish webby fibrils which are sometimes slightly interwoven. Usually they are appendiculate to the margin of the expanded pileus, but occasionally they adhere in part to the stem and form a kind of evanescent annulus. The lamellæ vary at their inner extremity, being either rounded behind, adnate or slightly decurrent. The plants do not inhabit alders alone as might be inferred from the specific name, but they also occur on birch and wood of other deciduous trees and on the ground.

Flammula flavida *Pers.*

PALE YELLOW FLAMMULA.

Hym. Europ. 248. Syl. Fung. Vol. v. p. 820.

Pileus fleshy, thin, broadly convex or nearly plane, glabrous, moist, pale yellow, flesh whitish or pale yellow, taste bitter; lamellæ moderately close, adnate, pale or yellowish becoming ferruginous; stem equal, often more or less curved, hollow, fibrillose, whitish or pale yellow, with a white mycelium at the base; spores .0003 in. long, .0002 broad.

Pileus 1 to 2 in. broad; stem 1 to 3 in. long, 1 to 3 lines thick.

Decaying wood of various trees. Commonly in wooded or mountainous districts. Summer and autumn.

Our specimens were found on wood of both coniferous and deciduous trees. The plants are sometimes cæspitose. The pileus becomes more highly colored in drying. The spores are pale ferruginous approaching ochraceous. In Sylloge the spores of this species are described as pale yellowish.

Flammula Halliana *Pk.*

HALL'S FLAMMULA.

Mus. Rep. 23, p. 90.

Pileus thin, hemispherical or convex, glabrous, hygrophanous, subferruginous with the margin obscurely striatulate when moist, dull yellow when dry; lamellæ close, subarcuate, slightly decurrent, tapering to a point at the outer extremity and ceasing before reaching

the margin, ferruginous; stem equal, slightly fibrillose, hollow, reddish-brown; spores ferruginous, .0003 to .0004 in. long, .0002 to .00024 broad.

Pileus 1 to 2 in. broad; stem 2 to 3 in. long, 2 to 3 lines thick.

Pastures. Albany county. November.

This plant was found more than twenty-five years ago and has not since been detected. Its flavor is bitterish. The fibrils of the veil form a slight fibrillose annulus on the stem which forms a lodging-place for the spores and becomes stained by them.

Flammula rigida *Pk.*

RIGID FLAMMULA.

Mus. Rep. 50, p. 104.

Pileus thin, rather firm and rigid, convex becoming nearly plane or centrally depressed, sometimes wavy on the margin, glabrous, hygrophanous, rusty-tawny or subferruginous when moist, buff or grayish-buff when dry, flesh concolorous; lamellæ moderately close, adnate, creamy-white becoming rusty tan color or subferruginous; stem equal or nearly so, tough, slightly striate, colored like the pileus, with a compact white tomentum on the lower part or at the base; spores broadly elliptical, .0003 to .00035 in. long, .00016 to .0002 broad.

Pileus 1 to 1.5 in. broad; stem 1 to 2 in. long, 1.5 to 3 lines thick.

Chip dirt. Adirondack mountains. September.

The plants are gregarious and by the mycelium they adhere closely to chips and fragments of wood from which they grow and which are usually pulled up with them when they are gathered. This is a smaller plant than the preceding one and has the dry pileus and shorter stem paler in color.

Sapineæ.

Pileus not viscose; lamellæ at first yellow or yellowish; veil almost none or fibrillose, not appendiculate; spores tawny or ochraceous.

The species of this tribe grow especially on decaying wood of pine and other coniferous trees or on the ground about or under them.

Flammula sapinea *Fr.*

PINE TREE FLAMMULA.

Hym. Europ. p. 251. Syl. Fung. Vol. v. p. 824.

Pileus fleshy, compact, hemispherical or convex, becoming expanded, sometimes irregular, obtuse, dry, slightly flocculose-squamulose when young, often becoming rimose and paler with age, golden-tawny, paler and shining on the margin, flesh yellowish, odor strong; lamellæ broad, close, adnate, yellow becoming tawny-cinnamon; stem commonly short, often unequal or irregular, compressed and sulcate, sometimes radicating, stuffed or hollow, yellowish or pallid; spores ochraceous, .0003 in. long, .0002 broad.

Pileus 1 to 3 in. broad; stem 1 to 2 in. long, 3 to 5 lines thick.

Decaying wood of pine. Onondaga county. September.

This is a rare species in our State. The plants are sometimes cæspitose.

Flammula magna *Pk.*

LARGE FLAMMULA.

Mus. Rep. 50, p. 103.

Pileus fleshy, broadly convex, soft, dry, fibrillose and somewhat virgate, pale yellow or buff, the margin commonly becoming revolute with age, flesh whitish or yellowish; lamellæ close, adnate or slightly decurrent, often crisped or wavy toward the stem, about three lines wide, ochraceous; stem equal or thickened toward the base, fleshy-fibrous, solid, elastic, fibrillose, colored like the pileus, brighter yellow within; spores subelliptical, ochraceous, .0004 in. long, .00024 broad.

Cæspitose; pileus 4 to 6 in. broad; stem 3 to 4 in. long, 8 to 12 lines thick.

About the base of trees. Westchester county. October.

This is a large and showy species. The stems are sometimes united at the base into a solid mass. The young lamellæ are probably yellow, but I have seen only mature specimens.

(F.)

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